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# Study Title COMBINED CHRONIC TOXICITY/ONCOGENICITY STUDY 2-YEAR ORAL GAVAGE STUDY IN RATS

Laboratory Project ID:

#### **Volume 12 of 13**

Number of pages in volume: 351 **TEST GUIDELINES:** • U.S. EPA Health Effects Test Guidelines OPPTS 870.4300 Combined Chronic Toxicity/Carcinogenicity (1998) • OECD Guidelines for the Testing of Chemicals Section 4 (No. 453) Health Effects (2009) • JMAFF Japan Agricultural Chemicals Regulation Law 12 Nousan No. 8147 (2000) • EEC Methods for the Determination of Toxicity Method B.33 Combined Chronic/Carcinogenicity test, Directive 88/302/EC (1988)**AUTHOR:** STUDY COMPLETED ON: March 28, 2013 **APPLICANT/SPONSOR:** PERFORMING LABORATORY: WORK REQUEST NUMBER: **SERVICE CODE NUMBER:** 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1519	E	Microscopic thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>pituitary tumor</li> </ul>
1520	S	Macroscopic mammary gland	<ul> <li>swollen/thickened, tan, generalized, mild corresponds to antemortem observation (swelling)</li> </ul>
1520	S	<b>Microscopic</b> adrenal glands kidneys	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> <li>hyperplasia, transitional cell, unilateral, minimal</li> <li>mineralization, pelvic, bilateral, minimal</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1520	S	Microscopic	
		liver	- focus of cellular alteration, basophilic, mild
			- focus of cellular alteration, eosinophilic, mild
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
		lung	- histiocytosis, alveolar, minimal
		mammary gland	- hyperplasia, lobular, mild
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		pancreas	<ul> <li>adenoma, islet cell, benign, primary, incidental, not cause of death</li> </ul>
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- within normal limits
1521	E	Macroscopic	70.1
		lymph node, axillary	- within normal limits
			draining node for mass a, right.

S - Scheduled necropsy E - Euthanized *in extremis* 

# Individual Animal Listing - FEMALE

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Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1521	Е	Macroscopic	
		lymph node, inguinal	- within normal limits
			draining node for mass b, right.
		skin, subcutis	- mass, tan, mass a, right axillary area, present
			corresponds to antemortem observation (mass 1)
			approximately 7.0 cm in diameter.
			- mass, tan, mass b, right inguinal area, present
			corresponds to antemortem observation (mass 2)
			approximately 11.0 x 6.0 x 4.0 cm.
1521	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			- hematopoiesis, extramedullary, bilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1521	E	Microscopic	
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- within normal limits
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, eosinophilic, mild
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
			- necrosis, focal, minimal
			- vacuolation, periportal, minimal
		lung	- histiocytosis, alveolar, minimal
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# Individual Animal Listing - FEMALE

I ermina
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Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1521	E	Microscopic	
		lymph node, axillary	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1521	E	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1521	E	Microscopic tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>metaplasia, squamous, minimal</li> <li>within normal limits</li> <li>mammary tumor</li> </ul>
1522	E	Macroscopic animal/whole body  lymph node, inguinal  pituitary gland skin, subcutis	<ul> <li>body fat depleted, moderate corresponds to antemortem observation (thin)</li> <li>within normal limits draining node for mass a, left.</li> <li>enlarged, red, severe</li> <li>mass, tan, mass a, left anogenital region, present corresponds to antemortem observation (mass 1) approximately 3.0 cm in diameter.</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1522	Е	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1522	Е	Microscopic	
		kidneys	- dilatation, tubular, bilateral, mild
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a)</li> </ul>
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1522	Е	Microscopic	
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1522	E	Microscopic small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>depletion, lymphoid, generalized, severe</li> <li>hyperplasia, c-cell, focal, unilateral, minimal</li> <li>within normal limits</li> <li>pituitary tumor</li> </ul>

			Termina
Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1523	Е	Macroscopic	
		lymph node, axillary	- within normal limits
			draining node for mass a, right, and mass c, right.
		lymph node, inguinal	- within normal limits
			draining node for mass b, right.
		pituitary gland	- enlarged, red, mild
		skin, subcutis	<ul> <li>mass, black, mass a, right axillary area, present</li> </ul>
			corresponds to antemortem observation (mass 1)
			approximately 4.5 x 4.0 x 2.0 cm.
			<ul> <li>mass, black, mass b, right anogenital region, present</li> </ul>
			corresponds to antemortem observation (mass 2)
			approximately 4.5 x 4.5 x 3.0 cm.
			- mass, tan, mass c, right axillary area, present
			corresponds to antemortem observation (nodule)
	_		approximately 0.8 x 0.5 x 0.5 cm.
1523	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
			- hyperplasia, focal medullary, unilateral, moderate
			<ul> <li>hypertrophy, focal cortical, unilateral, minimal</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1523	E	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1523	E	Microscopic large intestine, colon large intestine, rectum larynx liver	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>focus of cellular alteration, basophilic, minimal</li> <li>hematopoiesis, extramedullary, minimal</li> <li>hyperplasia, bile duct, minimal</li> </ul>
		lung lymph node, axillary lymph node, inguinal lymph node, mandibular lymph node, mesenteric	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>erythrocytosis/erythrophagocytosis, sinus, minimal</li> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1523	E	Microscopic	
	_	mammary gland  nerve, sciatic	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> <li>corresponds to macroscopic observation (skin, subcutis - mass b; skin, subcutis - mass c)</li> <li>galactocele, moderate</li> <li>corresponds to macroscopic observation (skin, subcutis - mass a)</li> <li>hyperplasia, lobular, minimal</li> <li>degeneration, axonal/myelin, minimal</li> </ul>
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	<ul> <li>within normal limits one of pair present</li> </ul>
		pharynx	- within normal limits

E - Euthanized in extremis

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Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1523	E	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death corresponds to macroscopic observation (pituitary gland - enlarged)</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1523	E	Microscopic	
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, mild
		thyroid gland	<ul> <li>adenoma, c-cell, benign, bilateral, primary, incidental, not cause of death</li> </ul>
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, minimal
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1524	E	Macroscopic	
		lymph node, axillary	- within normal limits
			draining node for mass a, left.
		lymph node, inguinal	- within normal limits
		<u>-</u>	draining node for mass b, right.

E - Euthanized in extremis

Group,

# Combined Chronic Toxicity/Oncogenicity Study 2-Year Oral Gavage Study in Rats

Fate	Tissue	Observations

zed, moderate
ervation (hair sparse swelling)
area, present
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a, mass a, present
ervation (mass 1)
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focal cortical, bilateral, mild
ımor), mild
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E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1524	E	Microscopic	
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hyperplasia, bile duct, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, inguinal	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1524	Е	Microscopic	
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
			- hyperplasia, lobular, mild
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		nerve, sciatic	<ul> <li>degeneration, axonal/myelin, minimal</li> </ul>
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		parathyroid glands	- not examined
		pharynx	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1524	E	Microscopic	
		pituitary gland	adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1524	E	Microscopic	
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, mild
			corresponds to macroscopic observation (uterus with cervix - enlarged)
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1525	E	Macroscopic	
		lymph node, axillary	- within normal limits
			left, draining node for mass a.
		pituitary gland	- enlarged, red, severe
		skin, subcutis	- mass, tan, mass a, left axillary area, present
			corresponds to antemortem observation (nodule swelling)
			approximately 1.0 x 1.0 x 0.5 cm.

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1525	Е	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1525	Е	Microscopic	
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, mandibular	<ul> <li>erythrocytosis/erythrophagocytosis, sinus, moderate</li> </ul>
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits

E - Euthanized in extremis

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Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1525	E	Microscopic	
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1525	E	Microscopic	
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- hyperplasia, c-cell, focal, bilateral, minimal
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, mild
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1526	E	Macroscopic	
		lymph node, inguinal	- not identified, bilateral, no grade
			draining node for mass a, left and mass b, right.
		pituitary gland	- enlarged, moderate

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1526	E	Macroscopic	
		skin, subcutis	- mass, tan, mass a, left inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 5.0 cm in diameter
			- mass, tan, mass b, right inguinal area, present
			approximately 2.0 cm in diameter.
1526	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
			<ul> <li>hyperplasia, focal cortical, unilateral, mild</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits

E - Euthanized in extremis

50 mg/kg/day 1526 E	Microscopic eyes, retina galt harderian glands heart joint, tibiofemoral kidneys	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>cardiomyopathy, minimal</li> <li>within normal limits</li> <li>mineralization, pelvic, unilateral, minimal</li> <li>mineralization, tubular, unilateral, minimal</li> <li>pyelitis, unilateral, minimal</li> </ul>
	eyes, retina galt harderian glands heart joint, tibiofemoral	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>cardiomyopathy, minimal</li> <li>within normal limits</li> <li>mineralization, pelvic, unilateral, minimal</li> <li>mineralization, tubular, unilateral, minimal</li> </ul>
	galt harderian glands heart joint, tibiofemoral	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>cardiomyopathy, minimal</li> <li>within normal limits</li> <li>mineralization, pelvic, unilateral, minimal</li> <li>mineralization, tubular, unilateral, minimal</li> </ul>
	harderian glands heart joint, tibiofemoral	<ul> <li>within normal limits</li> <li>cardiomyopathy, minimal</li> <li>within normal limits</li> <li>mineralization, pelvic, unilateral, minimal</li> <li>mineralization, tubular, unilateral, minimal</li> </ul>
	heart joint, tibiofemoral	<ul> <li>cardiomyopathy, minimal</li> <li>within normal limits</li> <li>mineralization, pelvic, unilateral, minimal</li> <li>mineralization, tubular, unilateral, minimal</li> </ul>
	joint, tibiofemoral	<ul><li>within normal limits</li><li>mineralization, pelvic, unilateral, minimal</li><li>mineralization, tubular, unilateral, minimal</li></ul>
	•	<ul><li>mineralization, pelvic, unilateral, minimal</li><li>mineralization, tubular, unilateral, minimal</li></ul>
	kidneys	- mineralization, tubular, unilateral, minimal
		- nvelitis unilateral minimal
		pychilo, armateral, minimal
	lacrimal glands, exorbital	- within normal limits
	large intestine, cecum	- within normal limits
	large intestine, colon	- within normal limits
	large intestine, rectum	- within normal limits
	larynx	- within normal limits
	liver	- focus of cellular alteration, basophilic, minimal
		- hematopoiesis, extramedullary, minimal
		- hyperplasia, bile duct, minimal
		- vacuolation, periportal, minimal
	lung	- histiocytosis, alveolar, minimal
	lymph node, mandibular	- within normal limits

SO mg/kg/day   1526   E   Microscopic   lymph node, mesenteric mammary gland   - within normal limits   fibroadenoma, benign, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)   hyperplasia, lobular, mild   nerve, sciatic   degeneration, axonal/myelin, minimal   exudate, nasal passage, moderate   inflammation, mild   nose, level b   exudate, nasal passage, moderate   inflammation, minimal   nose, level c   exudate, nasal passage, moderate   inflammation, minimal   nose, level d   exudate, nasal passage, minimal   exudate, nasal p	Group, Animal Number	Fate	Tissue	Observations
E   Microscopic   lymph node, mesenteric   mammary gland   fibroadenoma, benign, multiple, primary, mortality-independent   corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)   hyperplasia, lobular, mild   nerve, sciatic   degeneration, axonal/myelin, minimal   nose, level a   exudate, nasal passage, moderate   inflammation, mild   nose, level b   exudate, nasal passage, moderate   inflammation, minimal   nose, level c   exudate, nasal passage, minimal   nose, level d   exudate, nasal passage, minimal   ovaries   oviducts   exudate, nasal passage, minimal   ovaries   oviducts   exidate, nasal passage, minimal   exudate, nasal passage, minimal   ovaries   exidate, nasal passage, minimal   exidate, nasal p	50 mg/kg/day			
fibroadenoma, benign, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)  hyperplasia, lobular, mild  nerve, sciatic nose, level a  exudate, nasal passage, moderate inflammation, mild  nose, level b  exudate, nasal passage, moderate inflammation, milmal  nose, level c exudate, nasal passage, minimal  exudate, nasal passage, moderate  inflammation, mild  exudate, nasal passage, moderate  inflamation, mild  exudate, nasal passage, moderate  inflammation, mild  exudate, nasal passage, moderate  inflammation, mild  exudate, nasal passage, moderate  inflammation, mild  exudate, nasal pas		E	Microscopic	
corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)  hyperplasia, lobular, mild  nerve, sciatic degeneration, axonal/myelin, minimal  nose, level a exudate, nasal passage, moderate  inflammation, mild  nose, level b exudate, nasal passage, moderate  inflammation, minimal  nose, level c exudate, nasal passage, minimal  nose, level d exudate, nasal passage, minimal  ovaries within normal limits  oviducts within normal limits  pancreas within normal limits  parathyroid glands within normal limits  one of pair present			lymph node, mesenteric	- within normal limits
skin, subcutis - mass b) - hyperplasia, lobular, mild nerve, sciatic nose, level a - exudate, nasal passage, moderate - inflammation, mild nose, level b - exudate, nasal passage, moderate - inflammation, mild nose, level c - inflammation, minimal nose, level c - exudate, nasal passage, minimal nose, level d - exudate, nasal passage, minimal nose, level d - exudate, nasal passage, minimal exudate, nasal passage, moderate exidate, nasal passage, mo			mammary gland	- fibroadenoma, benign, multiple, primary, mortality-independent
nerve, sciatic				
nose, level a  exudate, nasal passage, moderate  inflammation, mild  nose, level b  exudate, nasal passage, moderate  inflammation, minimal  nose, level c  exudate, nasal passage, minimal  nose, level d  ovaries  oviducts  oviducts  pancreas  parathyroid glands  exudate, nasal passage, minimal  exudate, nasal passage, moderate				- hyperplasia, lobular, mild
- inflammation, mild  nose, level b  - exudate, nasal passage, moderate  - inflammation, minimal  nose, level c  - exudate, nasal passage, minimal  nose, level d  - exudate, nasal passage, minimal  ovaries  - within normal limits  oviducts  pancreas  pancreas  parathyroid glands  - inflammation, mild  - exudate, nasal passage, minimal  - widate, nasal passage, minimal  - within normal limits  - within normal limits  one of pair present			nerve, sciatic	- degeneration, axonal/myelin, minimal
nose, level b - exudate, nasal passage, moderate - inflammation, minimal  nose, level c - exudate, nasal passage, minimal nose, level d - exudate, nasal passage, minimal ovaries - within normal limits oviducts - within normal limits pancreas - within normal limits parathyroid glands - within normal limits one of pair present			nose, level a	<ul> <li>exudate, nasal passage, moderate</li> </ul>
- inflammation, minimal  nose, level c nose, level d ovaries oviducts pancreas parathyroid glands  - inflammation, minimal - exudate, nasal passage, minimal - exudate, nasal passage, minimal - within normal limits - within normal limits - within normal limits - within normal limits - one of pair present				- inflammation, mild
nose, level c nose, level d ovaries oviducts pancreas parathyroid glands - exudate, nasal passage, minimal within normal limits one of pair present			nose, level b	<ul> <li>exudate, nasal passage, moderate</li> </ul>
nose, level d ovaries oviducts pancreas parathyroid glands  - exudate, nasal passage, minimal within normal limits - within normal limits - within normal limits - within normal limits one of pair present				- inflammation, minimal
ovaries - within normal limits oviducts - within normal limits pancreas - within normal limits parathyroid glands - within normal limits one of pair present			nose, level c	<ul> <li>exudate, nasal passage, minimal</li> </ul>
oviducts - within normal limits pancreas - within normal limits parathyroid glands - within normal limits one of pair present			nose, level d	<ul> <li>exudate, nasal passage, minimal</li> </ul>
pancreas - within normal limits parathyroid glands - within normal limits one of pair present			ovaries	- within normal limits
parathyroid glands - within normal limits one of pair present			oviducts	- within normal limits
one of pair present			pancreas	- within normal limits
			parathyroid glands	- within normal limits
pharynx - within normal limits				one of pair present
			pharynx	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1526	E	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1526	E	Microscopic	
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	<ul> <li>adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death</li> </ul>
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1527	E	Macroscopic	
		ears	- nodule, tan, left, present
			corresponds to antemortem observation (nodule)
			approximately 0.4 cm in diameter.
		lymph node, axillary	- within normal limits
		•	draining node for mass b, right.

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1527	E	Macroscopic lymph node, inguinal pituitary gland skin, subcutis	<ul> <li>within normal limits draining node for mass a, right.</li> <li>enlarged, red, moderate</li> <li>mass, tan, mass a, right anogenital region, present corresponds to antemortem observation (mass 1) approximately 2.5 cm in diameter.</li> <li>mass, tan, mass b, right axillary area, present corresponds to antemortem observation (mass 2) approximately 8.5 x 9.0 x 3.5 cm.</li> </ul>
1527	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, mild</li> <li>within normal limits</li> <li>compression, ventral (pituitary tumor), mild</li> <li>within normal limits</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1527	E	Microscopic	
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	<ul> <li>degeneration/atrophy, retina, unilateral, mild</li> </ul>
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1527	Е	Microscopic	
		liver	- focus of cellular alteration, basophilic, minimal
			- focus of cellular alteration, eosinophilic, minimal
			- hyperplasia, bile duct, minimal
			- hypertrophy, hepatocyte, centrilobular, minimal
			- vacuolation, periportal, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, axillary	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	<ul> <li>erythrocytosis/erythrophagocytosis, sinus, minimal</li> </ul>
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>fibroadenoma, benign, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)</li> <li>hyperplasia, lobular, mild</li> </ul>
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1527	Е	Microscopic	
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- hyperplasia, acinar cell, focal, moderate
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		skin, subcutis	- fibrosarcoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (ears - nodule)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1527	E	Microscopic spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>hematopoiesis, extramedullary, increased, mild</li> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, severe</li> <li>within normal limits</li> </ul>
		vagina Cause of Death	<ul> <li>within normal limits</li> <li>mammary tumor</li> </ul>
1528	S	Macroscopic lymph node, inguinal	- not identified, right, no grade draining node for mass a.

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1528	S	Macroscopic	
		skin, subcutis	- mass, tan, mass a, right inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 8.0 x 7.0 x 4.5 cm.
		spleen	- enlarged, mild
		uterus with cervix	- enlarged, cervix, mild
1528	S	Microscopic	
		adrenal glands	<ul> <li>hyperplasia, focal medullary, bilateral, mild</li> </ul>
		kidneys	<ul> <li>dilatation, tubular, bilateral, mild</li> </ul>
			- edema, papilla, unilateral, minimal
			<ul> <li>hyperplasia, transitional cell, bilateral, minimal</li> </ul>
			<ul> <li>mineralization, pelvic, bilateral, minimal</li> </ul>
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
		liver	- hematopoiesis, extramedullary, minimal
			<ul> <li>hyperplasia, bile duct, minimal</li> </ul>
		lung	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
		pancreas	- hyperplasia, acinar cell, focal, mild

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1528	S	Microscopic	
		spleen	<ul> <li>hematopoiesis, extramedullary, increased, mild corresponds to macroscopic observation (spleen - enlarged)</li> </ul>
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	<ul> <li>dilatation, gland/lumen, moderate</li> </ul>
			corresponds to macroscopic observation (uterus with cervix - enlarged)
			- hyperplasia, cervical fibromuscular, mild
			corresponds to macroscopic observation (uterus with cervix - enlarged)
			- hyperplasia, squamous cell, minimal
1529	Е	Macroscopic	
		pituitary gland	- enlarged, moderate
1529	Е	Microscopic	•
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1529	Е	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1529	E	Microscopic	
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>degeneration, cystic, focal, minimal</li> </ul>
			<ul> <li>focus of cellular alteration, clear, minimal</li> </ul>
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits

E - Euthanized in extremis

### Individual Animal Listing - FEMALE Terminal

Group, Observations Animal Number Fate Tissue 50 mg/kg/day 1529 Ε Microscopic pituitary gland - adenoma, pars distalis, benign, primary, fatal, positive cause of death corresponds to macroscopic observation (pituitary gland enlarged) salivary gland, mandibular - within normal limits salivary gland, parotid - within normal limits salivary gland, sublingual - within normal limits skeletal muscle, biceps femoris - within normal limits - within normal limits skin small intestine, duodenum - within normal limits small intestine, ileum - within normal limits small intestine, jejunum - within normal limits spinal cord, cervical - within normal limits spinal cord, lumbar - within normal limits spinal cord, thoracic - within normal limits spleen - within normal limits stomach, glandular - within normal limits stomach, nonglandular - within normal limits thymus - depletion, lymphoid, generalized, severe

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1529	E	Microscopic	
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1530	Е	Macroscopic	
		pituitary gland	- enlarged, red, moderate
1530	Е	Microscopic	• , ,
1000		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
			- hyperplasia, focal cortical, unilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits

E - Euthanized in extremis

Microscopic bone marrow, sternum bone, femur bone, sternum brain esophagus eyes eyes, optic nerves	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>compression, ventral (pituitary tumor), mild</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> </ul>
bone marrow, sternum bone, femur bone, sternum brain esophagus eyes	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>compression, ventral (pituitary tumor), mild</li> <li>within normal limits</li> <li>within normal limits</li> </ul>
bone, femur bone, sternum brain esophagus eyes	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>compression, ventral (pituitary tumor), mild</li> <li>within normal limits</li> <li>within normal limits</li> </ul>
bone, sternum brain esophagus eyes	<ul> <li>within normal limits</li> <li>compression, ventral (pituitary tumor), mild</li> <li>within normal limits</li> <li>within normal limits</li> </ul>
brain esophagus eyes	<ul><li>compression, ventral (pituitary tumor), mild</li><li>within normal limits</li><li>within normal limits</li></ul>
esophagus eyes	<ul><li>within normal limits</li><li>within normal limits</li></ul>
eyes	- within normal limits
•	
eyes, optic nerves	- within normal limits
eyes, retina	- within normal limits
galt	- within normal limits
harderian glands	- hyperplasia, focal, unilateral, minimal
heart	- within normal limits
joint, tibiofemoral	- within normal limits
kidneys	- hydronephrosis, unilateral, mild
	- hyperplasia, transitional cell, bilateral, minimal
	- mineralization, pelvic, unilateral, minimal
	- nephropathy, chronic progressive, bilateral, minimal
lacrimal glands, exorbital	- within normal limits
large intestine, cecum	- within normal limits
large intestine, colon	- within normal limits
	galt harderian glands heart joint, tibiofemoral kidneys  lacrimal glands, exorbital large intestine, cecum

E - Euthanized in extremis

### Individual Animal Listing - FEMALE Terminal

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1530	E	Microscopic	
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>vacuolation, periportal, minimal</li> </ul>
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>hyperplasia, lobular, mild</li> </ul>
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits

- within normal limits

- within normal limits

- within normal limits

- atrophy, acinar, mild

oviducts

pancreas

pharynx

parathyroid glands

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1530	Е	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1530	E	Microscopic	
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- hyperplasia, c-cell, focal, unilateral, mild
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1531	Е	Macroscopic	
		mammary gland	- swollen/thickened, tan, left axillary area, mild
		, ,	corresponds to antemortem observation (swelling)
		pituitary gland	- enlarged, red, severe
		stomach, nonglandular	- irregular surface, tan, mild

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1531	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
			<ul> <li>vacuolation, focal, unilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	<ul> <li>compression, ventral (pituitary tumor), moderate</li> </ul>
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
		-	- nephropathy, chronic progressive, unilateral, minimal

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1531	E	Microscopic	
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1531	Е	Microscopic	
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1531	E	Microscopic	
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	<ul> <li>hyperplasia, epithelial, nonglandular, moderate</li> </ul>
			corresponds to macroscopic observation (stomach, nonglandular - irregular surface)
			- inflammation, mild
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1532	S	Macroscopic	
		lymph node, axillary	- within normal limits
		·	draining node for mass b, right.

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1532	S	Macroscopic	
		lymph node, inguinal	- not identified, left, no grade
			draining node for mass c and mass d.
		lymph node, mandibular	- within normal limits
			draining node for mass a, right.
		pituitary gland	- enlarged, red, mild
		skin, subcutis	- mass, tan, mass a, right lateral neck, present
			corresponds to antemortem observation (mass 1)
			approximately 6.0 x 5.0 x 2.5 cm.
			<ul> <li>mass, tan, mass b, right axillary area, present</li> </ul>
			corresponds to antemortem observation (swelling)
			approximately 2.5 cm in diameter.
			- mass, tan, mass c, left inguinal area, present
			approximately 3.0 x 3.0 x 1.0 cm.
			<ul> <li>mass, tan, mass d, left anogenital region, present</li> </ul>
			approximately 2.5 cm in diameter.
1532	S	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild

S - Scheduled necropsy

50 mg/kg/day 1532	S		
1532	S		
		Microscopic	
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, unilateral, minimal</li> </ul>
		liver	<ul> <li>hematopoiesis, extramedullary, minimal</li> </ul>
			- hyperplasia, bile duct, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- within normal limits
		mammary gland	<ul> <li>fibroadenoma, benign, multiple, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b; skin, subcutis - mass c; skin, subcutis - mass d)
		pancreas	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1532	S	Microscopic uterus with cervix	- within normal limits
1533	E	Macroscopic lymph node, axillary skin, subcutis	<ul> <li>within normal limits</li> <li>draining node for mass a, left.</li> <li>mass, ulcerated, mass a, left axillary area, present</li> <li>corresponds to antemortem observation (mass 1)</li> <li>approximately 7.0 x 7.0 x 3.0 cm, tan.</li> </ul>
1533	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, mild</li> <li>within normal limits</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1533	Е	Microscopic	
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	<ul> <li>nephropathy, chronic progressive, unilateral, minimal</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1533	Е	Microscopic	
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- exudate, nasal passage, mild
			- foreign material, minimal
			plant.
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits

E - Euthanized in extremis

		16	ennina
Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1533	E	Microscopic	
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- hyperplasia, c-cell, focal, unilateral, minimal
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1533	E	Microscopic	
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1534	D	Macroscopic	
		pituitary gland	- enlarged, moderate
1534	D	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), severe
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1534	D	Microscopic	
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- exudate, luminal, minimal
		•	- inflammation, minimal
		liver	- hyperplasia, bile duct, minimal
			- infiltration, mononuclear cell, minimal
			- vacuolation, periportal, mild
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		1.5.15, 601410	main normal limito

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1534	D	Microscopic	
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- mucus increased, mild
		nose, level d	- mucus increased, mild
		ovaries	- cyst, unilateral, mild
			- hyperplasia, sex-cord/stromal, bilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1534	D	Microscopic small intestine, duodenum small intestine, ileum small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>hematopoiesis, extramedullary, increased, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>inflammation, acute, minimal</li> <li>within normal limits</li> <li>pituitary tumor</li> </ul>

Group, Animal Number	Fate	Tissue	Observations	
50 mg/kg/day				
1535	Е	Macroscopic		
		lymph node, axillary	- within normal limits	
			draining node for mass a, left.	
		skin, subcutis	- mass, ulcerated, mass a, left lateral neck, present	
			corresponds to antemortem observation (mass 1)	
			approximately 8.0 x 7.0 x 5.0 cm, tan.	
1535	E	Microscopic		
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>	
			one medulla present	
		aorta	- within normal limits	
		bone marrow, femur	- within normal limits	
		bone marrow, sternum	- within normal limits	
		bone, femur	- within normal limits	
		bone, sternum	- within normal limits	
		brain	- within normal limits	
		esophagus	- within normal limits	
		eyes	- within normal limits	
		eyes, optic nerves	- within normal limits	

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
<u>50 mg/кg/day</u> 1535	E	Microscopic eyes, retina galt harderian glands heart joint, tibiofemoral kidneys	<ul> <li>within normal limits</li> <li>dilatation, tubular, bilateral, mild</li> <li>edema, papilla, bilateral, minimal</li> </ul>
		lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum larynx liver  lung lymph node, axillary lymph node, mandibular	<ul> <li>nephropathy, chronic progressive, unilateral, minimal</li> <li>within normal limits</li> <li>focus of cellular alteration, basophilic, minimal</li> <li>hematopoiesis, extramedullary, minimal</li> <li>necrosis, hepatocytes, centrilobular, moderate</li> <li>histiocytosis, alveolar, minimal</li> <li>hyperplasia, lymphocyte/plasmacyte, medulla, mild</li> <li>within normal limits</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1535	Е	Microscopic	
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
		, ,	corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1535	Е	Microscopic	
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1535	E	<b>Microscopic</b> Cause of Death	- mammary tumor
1536	E	<b>Macroscopic</b> pituitary gland skin	<ul> <li>enlarged, moderate</li> <li>hair sparse, generalized, mild     corresponds to antemortem observation (hair sparse)     most affected areas dorsal cervical, forelimbs bilateral and     shoulders bilateral.</li> </ul>
1536	E	Microscopic adrenal glands  aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain	<ul> <li>angiectasis/cystic degeneration, focal cortical, unilateral, moderate</li> <li>within normal limits</li> <li>compression, ventral (pituitary tumor), moderate</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1536	E	Microscopic	
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- hydronephrosis, unilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- angiectasis, mild
			- hyperplasia, bile duct, minimal
		lung	- histiocytosis, alveolar, minimal

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1536	Е	Microscopic	
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1536	E	Microscopic	
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- alopecia/hypotrichosis, mild
			corresponds to macroscopic observation (skin - hair sparse)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1536	Е	Microscopic	
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1537	Е	Macroscopic	
		pituitary gland	- enlarged, severe
1537	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1537	Е	Microscopic	
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- nephropathy, chronic progressive, bilateral, minimal
			- pyelitis, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hyperplasia, bile duct, minimal
			- hypertrophy, hepatocyte, centrilobular, minimal
			- vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		lymph node, mesenteric	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1537	E	Microscopic	
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
		oviducts	- within normal limits
			one of pair present
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1537	Е	Microscopic	
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		•	- hyperplasia, epithelial cell, minimal
		thyroid gland	<ul> <li>adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death</li> </ul>
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1537	E	Microscopic uterus with cervix vagina Cause of Death	<ul><li>within normal limits</li><li>within normal limits</li><li>pituitary tumor</li></ul>
1538	S	Macroscopic adrenal glands mammary gland ovaries	<ul> <li>enlarged, left, moderate</li> <li>swollen/thickened, mild</li> <li>right and left inguinal and axillary region mostly affected.</li> <li>cyst, clear, left, mild</li> </ul>
		pancreas spleen	<ul><li>cyst, red, multiple, mild</li><li>focus/foci, white, mild</li></ul>
1538	S	Microscopic adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, severe</li> <li>corresponds to macroscopic observation (adrenal glands - enlarged)</li> <li>atrophy, cortical, unilateral, moderate</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1538	S	Microscopic	
		kidneys	- mineralization, pelvic, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
			- polyarteritis, bilateral, moderate
			renal artery.
			- pyelitis, unilateral, minimal
		liver	- focus of cellular alteration, basophilic, minimal
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, mesenteric	- dilatation, sinus, mild
			corresponds to macroscopic observation (pancreas - cyst)
		mammary gland	- fibroadenoma, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
			- hyperplasia, lobular, moderate
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		ovaries	- cyst, unilateral, mild
			corresponds to macroscopic observation (ovaries - cyst)
			- hyperplasia, sex-cord/stromal, unilateral, minimal

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1538	S	Microscopic	
		pancreas	- atrophy, acinar, minimal
			- polyarteritis, moderate
			corresponds to macroscopic observation (pancreas - cyst)
		spleen	- fibrosis, capsular, mild
			corresponds to macroscopic observation (spleen - focus/foci, white)
			- hematopoiesis, extramedullary, increased, minimal
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, minimal
1539	Е	Macroscopic	
		lung with bronchi	- discoloration, pink, azygous lobe, moderate
		lymph node, axillary	- within normal limits
			draining node for mass a, right and mass c, left.
		lymph node, mandibular	- within normal limits
			draining node for mass b, left.
		pituitary gland	- enlarged, mild

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1539	Е	Macroscopic	
		skin	- abrasion/scab, right lateral head, moderate
			corresponds to antemortem observation (abrasion(s) swelling)
		skin, subcutis	- mass, tan, mass a, right axillary area, present
			corresponds to antemortem observation (mass 1)
			approximately 6.0 x 4.0 x 3.0 cm.
			<ul> <li>mass, tan, mass b, left lateral neck, present</li> </ul>
			approximately 1.5 x 1.5 x 0.5 cm.
			- mass, tan, mass c, left axillary area, present
			corresponds to antemortem observation (swelling)
	_		approximately 1.0 cm in diameter.
1539	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, minimal
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1539	E	Microscopic	
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
			- vacuolation, periportal, mild
		lung	- histiocytosis, alveolar, minimal

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1539	E	Microscopic	
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass b)
			- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass c)
			- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1539	E	Microscopic	
		pharynx	- within normal limits
		pituitary gland	adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	<ul> <li>carcinoma, squamous cell, malignant, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (skin - abrasion/scab)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1539	E	Microscopic stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	<ul><li>depletion, lymphoid, generalized, moderate</li><li>hyperplasia, epithelial cell, minimal</li></ul>
		thyroid gland	- within normal limits
		tongue	<ul><li>hyperplasia, squamous cell, moderate</li><li>inflammation, subacute/chronic, mild</li></ul>
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		non-correlated macro observation	- lung with bronchi - discoloration, pink
		Cause of Death	- skin tumor
1540	E	Macroscopic	
		lymph node, axillary	- within normal limits
			right is draining node for mass c.

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1540	E	Macroscopic	
		lymph node, inguinal	- within normal limits
			right is draining node for mass a, left is draining node for mass b.
		pituitary gland	- enlarged, red, severe
		skin, subcutis	- mass, tan, mass b, left inguinal area, present
			corresponds to antemortem observation (mass 2)
			approximately 4.5 x 3.0 x 3.0 cm.
			- mass, tan, mass c, right axillary area, present
			corresponds to antemortem observation (mass 3)
			approximately 2.0 cm in diameter.
			- mass, ulcerated, mass a, right inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 2.5 x 2.0 x 1.5 cm and tan in color.
1540	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, lemui	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1540	Е	Microscopic	
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1540	Е	Microscopic	
		liver	- focus of cellular alteration, basophilic, mild
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
			- vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, axillary	- not examined
			not found at the time of trimming
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass b; skin, subcutis - mass c)
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1540	E	Microscopic	
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1540	E	Microscopic spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus  thyroid gland tongue  trachea ureters urinary bladder uterus with cervix vagina	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>hematopoiesis, extramedullary, increased, mild</li> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>hyperplasia, epithelial cell, minimal</li> <li>within normal limits</li> <li>hyperplasia, squamous cell, moderate</li> <li>inflammation, subacute/chronic, mild</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>dilatation, gland/lumen, mild</li> <li>within normal limits</li> </ul>
1541	S	Cause of Death  Macroscopic  adrenal glands	<ul><li>mammary tumor</li><li>enlarged, red, right, mild</li></ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1541	S	Macroscopic	
		lymph node, mandibular	- within normal limits
			draining node for mass a, right. draining node for mass b, left.
		mammary gland	<ul> <li>swollen/thickened, tan, generalized, moderate</li> </ul>
		pituitary gland	- enlarged, red, mild
		skin, subcutis	- mass, tan, mass a, right lateral neck, present
			corresponds to antemortem observation (swelling)
			approximately 2.3 cm in diameter.
			- mass, tan, mass b, left lateral neck, present
			approximately 2.0 cm in diameter.
1541	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, severe</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)
			- atrophy, cortical, unilateral, moderate
		kidneys	- hyperplasia, transitional cell, unilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1541	S	Microscopic	
		liver	- focus of cellular alteration, basophilic, mild
			- focus of cellular alteration, clear, minimal
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
			<ul> <li>vacuolation, periportal, minimal</li> </ul>
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
			- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
			- hyperplasia, lobular, mild
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		pancreas	- atrophy, acinar, minimal
			- hyperplasia, acinar cell, focal, minimal

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1541	S	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- within normal limits
1542	D	Macroscopic	
		mammary gland	- swollen/thickened, generalized, mild
		pituitary gland	- enlarged, red, severe
		skin	- abrasion/scab, dorsal thoracic region, mild
			- hair sparse, neck, shoulder, right, mild
			corresponds to antemortem observation (hair sparse)
1542	D	Microscopic	
		adrenal glands	- within normal limits
		aorta	- within normal limits

S - Scheduled necropsy D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1542	D	Microscopic	
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, minimal</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1542	D	Microscopic	
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1542	D	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- alopecia/hypotrichosis, mild
			corresponds to macroscopic observation (skin - hair sparse)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1542	D	Microscopic thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina non-correlated macro observation Cause of Death	<ul> <li>depletion, lymphoid, generalized, moderate</li> <li>within normal limits</li> <li>pituitary tumor</li> </ul>
1543	S	Macroscopic adrenal glands pituitary gland	<ul><li>enlarged, left, mild</li><li>cyst, clear, mild</li></ul>
1543	S	Microscopic adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate corresponds to macroscopic observation (adrenal glands - enlarged)</li> </ul>

S - Scheduled necropsy D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1543	S	Microscopic	
		kidneys	- mineralization, pelvic, bilateral, minimal
		liver	- hyperplasia, bile duct, minimal
		lung	- within normal limits
		pancreas	- atrophy, acinar, minimal
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - cyst)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- within normal limits
1544	E	Macroscopic	
		pituitary gland	- enlarged, severe
		skin	- nodule, tan, nose/muzzle, present
			corresponds to antemortem observation (nodule)
			approximately 0.2 cm in diameter.
1544	Е	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, unilateral, moderate</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1544	Е	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- degeneration/atrophy, retina, unilateral, mild
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1544	Е	Microscopic	
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>focus of cellular alteration, basophilic, minimal</li> </ul>
			- hyperplasia, bile duct, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	<ul> <li>erythrocytosis/erythrophagocytosis, sinus, minimal</li> </ul>
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1544	Е	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- hyperplasia, epidermal, moderate
			corresponds to macroscopic observation (skin - nodule)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1544	Е	Microscopic	
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1545	D	Macroscopic	
		eyes	- absent/cannibalized, right, no grade
			corresponds to antemortem observation (cannibalized/partially cannibalized)
		eyes, optic nerves	- absent/cannibalized, right, no grade
			corresponds to antemortem observation (cannibalized/partially cannibalized)
		eyes, retina	- absent/cannibalized, right, no grade
		·	corresponds to antemortem observation (cannibalized/partially cannibalized)

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1545	D	Macroscopic	
		lacrimal glands, exorbital	- absent/cannibalized, right, no grade
			corresponds to antemortem observation (cannibalized/partially cannibalized)
		salivary gland, mandibular	- absent/cannibalized, bilateral, no grade
		salivary gland, parotid	- absent/cannibalized, bilateral, no grade
			corresponds to antemortem observation (cannibalized/partially cannibalized)
		salivary gland, sublingual	- absent/cannibalized, bilateral, no grade
			corresponds to antemortem observation (cannibalized/partially cannibalized)
1545	D	Microscopic	
		adrenal glands	- within normal limits
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1545	D	Microscopic	
		esophagus	- within normal limits
		eyes	- within normal limits
			one of pair present
		eyes, optic nerves	- within normal limits
			one of pair present
		eyes, retina	- not examined
			autolysis too severe for diagnosis
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- within normal limits
		lacrimal glands, exorbital	- within normal limits
			one of pair present
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1545	D	Microscopic	
		lung	- bacterial colonies, minimal
			areas with lysis of red blood cells indicative of dosing injury.
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- not examined
			cannibalized

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1545	D	Microscopic	
		salivary gland, parotid	- not examined
			cannibalized
		salivary gland, sublingual	- not examined
			cannibalized
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1545	D	Microscopic	
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- dosing injury
1546	S	Macroscopic	
		pituitary gland	- enlarged, red, mild
		uterus with cervix	- enlarged, horn, mild
1546	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
			- hyperplasia, focal cortical, unilateral, minimal
			<ul> <li>pheochromocytoma, benign, unilateral, primary, incidental, not cause of death</li> </ul>

S - Scheduled necropsy D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1546	S	Microscopic	
		kidneys	- hyperplasia, transitional cell, unilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, minimal</li> </ul>
		liver	- fibrosis, minimal
			<ul> <li>focus of cellular alteration, eosinophilic, minimal</li> </ul>
			<ul> <li>hematopoiesis, extramedullary, minimal</li> </ul>
			- hyperplasia, bile duct, minimal
			- necrosis, focal, minimal
		lung	- within normal limits
		pancreas	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, mild
			corresponds to macroscopic observation (uterus with cervix - enlarged)

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1547	S	Macroscopic	
		adrenal glands	- enlarged, left, mild
		pituitary gland	- enlarged, severe
1547	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)
		kidneys	- cyst, unilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		liver	- focus of cellular alteration, basophilic, minimal
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
		lung	- within normal limits
		pancreas	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1547	S	Microscopic pituitary gland stomach, nonglandular	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death corresponds to macroscopic observation (pituitary gland - enlarged)</li> <li>within normal limits</li> <li>within normal limits</li> </ul>
		tongue uterus with cervix	- within normal limits - within normal limits
1548	E	Macroscopic lymph node, inguinal	<ul> <li>not identified, right, no grade draining node for mass a and mass c. draining node for mass b, left.</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1548	Е	Macroscopic	
		skin, subcutis	- mass, tan, mass a, right anogenital region, present
			corresponds to antemortem observation (mass 1)
			approximately 9.0 x 5.0 x 3.0 cm.
			- mass, tan, mass b, left anogenital region, present
			approximately 3.0 cm in diameter.
			- mass, tan, mass c, right inguinal area, present
			approximately 2.0 x 1.5 x 1.0 cm.
		spleen	- enlarged, minimal
		uterus with cervix	- enlarged, horn, mild
1548	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
			- hyperplasia, focal cortical, bilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, minimal
		bone, femur	- within normal limits
		bone, sternum	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1548	E	Microscopic	
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- hyperplasia, transitional cell, unilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hematopoiesis, extramedullary, minimal
			- vacuolation, periportal, minimal

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1548	Е	Microscopic	
		lung	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b; skin, subcutis - mass c)
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1548	Е	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
			corresponds to macroscopic observation (spleen - enlarged)
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1548	E	Microscopic	
		thyroid gland	<ul> <li>adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death</li> </ul>
			<ul> <li>hyperplasia, c-cell, focal, unilateral, mild</li> </ul>
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, mild
			corresponds to macroscopic observation (uterus with cervix - enlarged)
		vagina	<ul> <li>granular cell tumor, benign, primary, incidental, not cause of death</li> </ul>
		Cause of Death	- mammary tumor
1549	s	Macroscopic	
		adrenal glands	- focus/foci, red, left, mild
		lymph node, inguinal	- not identified, bilateral, no grade
		, p = 2.2., (g-m.e.)	draining node for mass a, left and mass b, right.

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1549	S	<b>Macroscopic</b> pituitary gland skin, subcutis	<ul> <li>enlarged, mild</li> <li>mass, tan, mass a, left anogenital region, present corresponds to antemortem observation (mass 1) approximately 5.0 x 4.0 x 3.0 cm.</li> <li>mass, tan, mass b, right anogenital region, present approximately 1.5 cm in diameter.</li> </ul>
1549	S	Microscopic adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> <li>corresponds to macroscopic observation (adrenal glands - focus/foci, red)</li> <li>hyperplasia, focal medullary, unilateral, minimal</li> </ul>
		kidneys	<ul> <li>mineralization, pelvic, unilateral, minimal</li> <li>mineralization, tubular, unilateral, minimal</li> <li>nephropathy, chronic progressive, bilateral, minimal</li> </ul>
		liver lung	<ul> <li>focus of cellular alteration, basophilic, mild</li> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1549	S	Microscopic	
		mammary gland	<ul> <li>fibroadenoma, benign, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)</li> </ul>
		pancreas	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- within normal limits
1550	D	Macroscopic	
		lymph node, axillary	- within normal limits
			draining node for mass b, left.
		lymph node, inguinal	<ul> <li>not identified, left, no grade draining node for mass a.</li> </ul>
		pituitary gland	- enlarged, red, severe

S - Scheduled necropsy D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1550	D	Macroscopic	
		skin, subcutis	- mass, tan, mass a, left inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 4.0 x 3.0 x 2.0 cm.
			- mass, tan, mass b, left axillary area, present
			corresponds to antemortem observation (nodule)
			approximately 1.0 cm in diameter.
1550	D	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	<ul> <li>compression, ventral (pituitary tumor), moderate</li> </ul>
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations	
50 mg/kg/day				
1550	D	Microscopic galt harderian glands heart joint, tibiofemoral kidneys lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum larynx liver lung lymph node, axillary lymph node, mandibular lymph node, mesenteric	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>mineralization, pelvic, bilateral, minimal</li> <li>within normal limits</li> <li>hyperplasia, bile duct, minimal</li> <li>within normal limits</li> </ul>	

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1550	D	Microscopic	
		mammary gland	- adenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass b)
			- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	<ul> <li>degeneration, axonal/myelin, minimal</li> </ul>
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1550	D	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1550	D	Microscopic urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>metaplasia, squamous, minimal</li> <li>within normal limits</li> <li>pituitary tumor</li> </ul>
1551	E	Macroscopic lung with bronchi lymph node, iliac ovaries	<ul> <li>focus/foci, red, multiple lobes, mild</li> <li>within normal limits</li> <li>draining node for mass a, left.</li> <li>mass, red, mass a, left, present</li> </ul>
1551	E	stomach, nonglandular  Microscopic adrenal glands  aorta bone marrow, femur	<ul> <li>approximately 2.0 cm in diameter.</li> <li>focus/foci, tan, mild</li> <li>angiectasis/cystic degeneration, focal cortical, unilateral, minimal</li> <li>within normal limits</li> <li>within normal limits</li> </ul>

E - Euthanized in extremis

D - Died on Study

Group,			Terminal
Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1551	E	Microscopic	
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- lymphoma, malignant, multicentric, fatal, positive cause of death
		joint, tibiofemoral	- within normal limits
		kidneys	- hyaline, droplets, increased, bilateral, mild
			<ul> <li>lymphoma, malignant, bilateral, multicentric, fatal, positive cause of death</li> </ul>
			- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1551	E	Microscopic	
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- inflammation, minimal
		liver	- focus of cellular alteration, basophilic, minimal
			- lymphoma, malignant, multicentric, fatal, positive cause of death
		lung	- congestion, chronic passive, severe
			- lymphoma, malignant, multicentric, fatal, positive cause of death
			corresponds to macroscopic observation (lung with bronchi - focus/foci, red)
		lymph node, iliac	- within normal limits
		lymph node, mandibular	- lymphoma, malignant, multicentric, fatal, positive cause of death
		lymph node, mediastinal	<ul> <li>lymphoma, malignant, multicentric, fatal, positive cause of death slide 14.</li> </ul>
		lymph node, mesenteric	- erythrocytosis/erythrophagocytosis, sinus, mild
			- lymphoma, malignant, multicentric, fatal, positive cause of death
		mammary gland	- hyperplasia, lobular, mild
		multicentric neoplasm	- lymphoma, malignant, multicentric, fatal, positive cause of death
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1551	Е	Microscopic	
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	<ul> <li>sex-cord/stromal tumor, malignant, unilateral, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (ovaries - mass a) slide 15 and 26-1.
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		·	- fibrosis, minimal
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1551	E	Microscopic	
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- erosion/ulcer, severe
		•	corresponds to macroscopic observation (stomach, nonglandular - focus/foci, tan)
			- erosion/ulcer, limiting ridge, minimal
		thymus	- within normal limits
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1551	E	<b>Microscopic</b> vagina	- within normal limits
		Cause of Death	- lymphoid tumor
1552	E	Macroscopic	
		pituitary gland	- enlarged, severe
1552	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1552	Е	Microscopic	
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, mild
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1552	Е	Microscopic	
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1552	E	Microscopic spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>depletion, lymphoid, generalized, severe</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>not examined</li> <li>within normal limits</li> <li>pituitary tumor</li> </ul>
1553	S	Macroscopic adrenal glands	- enlarged, left, mild

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1553	S	Macroscopic	
		lymph node, axillary	- within normal limits
			draining node for mass b, right. draining node for mass c, left.
		lymph node, inguinal	- within normal limits
			draining node for mass a, right.
		pituitary gland	- enlarged, red, moderate
		skin, subcutis	- mass, tan, mass a, right inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 2.0 cm in diameter.
			<ul> <li>mass, tan, mass b, right axillary area, present</li> </ul>
			approximately 1.2 cm in diameter.
			- mass, tan, mass c, left axillary area, present
			approximately 1.8 cm in diameter.
1553	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, severe</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)
		kidneys	- mineralization, pelvic, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1553	S	Microscopic	
		liver	- infiltration, mononuclear cell, minimal
			- vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, inguinal	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass c)
			- fibroadenoma, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (skin, subcutis - mass b)
		pancreas	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, minimal

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1554	E	Macroscopic	
		lymph node, inguinal	- within normal limits
			draining node for mass a, right.
		pituitary gland	- enlarged, red, severe
		skin, subcutis	- mass, tan, mass a, right anogenital region, present
			approximately 3.5 cm in diameter.
1554	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	<ul> <li>compression, ventral (pituitary tumor), moderate</li> </ul>
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1554	E	Microscopic	
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- mineralization, tubular, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>focus of cellular alteration, eosinophilic, mild</li> </ul>
			<ul> <li>hematopoiesis, extramedullary, minimal</li> </ul>
			- hyperplasia, bile duct, minimal
		lung	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1554	Е	Microscopic	
		mammary gland	- fibroadenoma, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1554	E	Microscopic	
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1554	Е	<b>Microscopic</b> vagina Cause of Death	<ul><li>within normal limits</li><li>pituitary tumor</li></ul>
1555	D	Macroscopic pituitary gland skin thymus	<ul> <li>enlarged, red, moderate</li> <li>hair sparse, dorsal cervical region, dorsal head, mild corresponds to antemortem observation (hair sparse)</li> <li>small, moderate</li> </ul>
1555	D	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus	<ul> <li>within normal limits</li> <li>compression, ventral (pituitary tumor), moderate</li> <li>within normal limits</li> </ul>

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1555	D	Microscopic	
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, tubular, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, eosinophilic, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1555	D	Microscopic	
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1555	D	Microscopic	
		skin	- alopecia/hypotrichosis, mild
			corresponds to macroscopic observation (skin - hair sparse)
			- cyst, keratin, minimal
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
			corresponds to macroscopic observation (thymus - small)
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1555	D	Microscopic uterus with cervix vagina Cause of Death	<ul><li>within normal limits</li><li>within normal limits</li><li>pituitary tumor</li></ul>
1556	E	Macroscopic lymph node, inguinal lymph node, mandibular	<ul> <li>not identified, right, no grade</li> <li>draining node for mass c and mass d.</li> <li>draining node for mass a, left.</li> <li>within normal limits</li> </ul>
		pituitary gland	draining node for mass b, right enlarged, mild

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1556	Е	Macroscopic	
		skin, subcutis	- mass, tan, right anogenital region, mass c, present
			approximately 1.2 cm in diameter.
			- mass, tan, right inguinal area, mass d, present
			approximately 1.4 cm in diameter.
			<ul> <li>mass, tan, right lateral neck, mass b, present</li> </ul>
			corresponds to antemortem observation (nodule)
			approximately 1.2 cm in diameter.
			<ul> <li>mass, ulcerated, left anogenital region, mass a, present</li> </ul>
			corresponds to antemortem observation (mass 1 skin discolored)
			approximately 3.0 cm in diameter, tan.
1556	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1556	Е	Microscopic	
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hematopoiesis, extramedullary, minimal
		lung	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1556	E	Microscopic	
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> <li>corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b; skin, subcutis - mass c; skin, subcutis - mass d)</li> </ul>
			- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, mild
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1556	Е	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1556	E	Microscopic	
		thymus	- depletion, lymphoid, generalized, severe
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- metaplasia, squamous, minimal
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1557	E	Macroscopic	
		pituitary gland	- enlarged, red, severe
		stomach, nonglandular	- irregular surface, mild
1557	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1557	Е	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	<ul> <li>hyperplasia, transitional cell, unilateral, mild</li> </ul>
			<ul> <li>mineralization, pelvic, bilateral, minimal</li> </ul>
			- pyelitis, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1557	Е	Microscopic	
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
			- infiltration, mononuclear cell, minimal
			- necrosis, focal, minimal
			- vacuolation, periportal, mild
		lung	- within normal limits
		lymph node, mandibular	<ul> <li>erythrocytosis/erythrophagocytosis, sinus, minimal</li> </ul>
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1557	Е	Microscopic	
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1557	Е	Microscopic	
		stomach, nonglandular	<ul> <li>hyperplasia, epithelial, nonglandular, moderate</li> </ul>
			corresponds to macroscopic observation (stomach, nonglandular - irregular surface) - inflammation, mild
			corresponds to macroscopic observation (stomach, nonglandular - irregular surface)
		thymus	<ul> <li>depletion, lymphoid, generalized, moderate</li> </ul>
		thyroid gland	<ul> <li>carcinoma, c-cell, malignant, unilateral, primary, incidental, not cause of death</li> </ul>
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, mild
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1558	E	Macroscopic	
		adrenal glands	- enlarged, left, minimal

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1558	E	Macroscopic	
		cavity, thoracic	- fluid, clear, minimal
			approximately 1.0 ml.
		kidneys	- discoloration, tan, bilateral, minimal
		liver	- discoloration, tan, multiple lobes, minimal
		lymph node, axillary	- within normal limits
			draining node for mass a, left.
		lymph node, inguinal	- within normal limits
			draining node for mass b, left.
		pituitary gland	- enlarged, red, moderate
		skin, subcutis	- mass, scabbed, mass a, left axillary area, present
			corresponds to antemortem observation (mass 1)
			approximately 20.0 cm in diameter, tan.
			- mass, tan, mass b, left anogenital region, present
			approximately 2.0 x 1.0 x 1.0 cm.
		spleen	- enlarged, mild

			reminal
Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1558	E	Microscopic	
		aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus eyes eyes, optic nerves eyes, retina galt	<ul> <li>adenoma, cortical, benign, unilateral, primary, incidental, not cause of death</li> <li>corresponds to macroscopic observation (adrenal glands - enlarged)</li> <li>angiectasis/cystic degeneration, focal cortical, unilateral, minimal</li> <li>hematopoiesis, extramedullary, bilateral, minimal</li> <li>hyperplasia, focal cortical, bilateral, mild</li> <li>within normal limits</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1558	Е	Microscopic	
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, bilateral, mild
			<ul> <li>hyaline, droplets, increased, bilateral, mild</li> </ul>
			corresponds to macroscopic observation (kidneys - discoloration, tan)
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- degeneration, cystic, focal, minimal
			<ul> <li>infiltration, mononuclear cell, minimal</li> </ul>
			- necrosis, hepatocytes, centrilobular, mild
			corresponds to macroscopic observation (liver - discoloration, tan)
		lung	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1558	E	Microscopic	
		lymph node, axillary	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass b)
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1558	Е	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		skin, subcutis	- fibrosarcoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
			corresponds to macroscopic observation (spleen - enlarged)
		stomach, glandular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1558	E	Microscopic stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>within normal limits</li> <li>dilatation, gland/lumen, minimal</li> <li>within normal limits</li> <li>fibrosarcoma/fibroma</li> </ul>
1559	S	Macroscopic lymph node, inguinal	<ul> <li>not identified, bilateral, no grade draining node for mass a, right. draining node for mass b, left.</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1559	S	Macroscopic	
		skin, subcutis	- mass, tan, mass a, right inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 5.5 x 5.5 x 3.0 cm.
			- mass, tan, mass b, left inguinal area, present
			approximately 1.0 cm in diameter.
1559	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, unilateral, moderate</li> </ul>
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
		liver	- focus of cellular alteration, basophilic, mild
			<ul> <li>hematopoiesis, extramedullary, minimal</li> </ul>
			- hyperplasia, bile duct, minimal
			<ul> <li>vacuolation, periportal, minimal</li> </ul>
		lung	- histiocytosis, alveolar, minimal

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1559	S	Microscopic mammary gland  pancreas stomach, nonglandular tongue uterus with cervix	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> <li>corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)</li> <li>within normal limits</li> </ul>
1560	E	Macroscopic adrenal glands lymph node, mandibular pituitary gland skin, subcutis	<ul> <li>enlarged, tan, right, mild</li> <li>not identified, bilateral, no grade draining node for mass a.</li> <li>enlarged, tan, mild</li> <li>mass, ulcerated, mass a, ventral neck, present corresponds to antemortem observation (mass 1) approximately 5.0 x 4.5 x 3.0 cm, tan.</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1560	E	Microscopic	
		adrenal glands	angiectasis/cystic degeneration, focal cortical, unilateral, moderate
			corresponds to macroscopic observation (adrenal glands - enlarged)
			- hyperplasia, focal cortical, unilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, mild
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
560	Е	Microscopic	
		kidneys	- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hematopoiesis, extramedullary, minimal
		lung	- within normal limits
		lymph node, mandibular	- not examined
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1560	Е	Microscopic	
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1560	E	Microscopic	
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	<ul> <li>hematopoiesis, extramedullary, increased, minimal</li> </ul>
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	<ul> <li>depletion, lymphoid, generalized, severe</li> </ul>
			- hyperplasia, epithelial cell, minimal
		thyroid gland	<ul> <li>adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death</li> </ul>
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- mammary tumor

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1566	D	Macroscopic	
		skin	<ul> <li>hair sparse, dorsal cervical region, dorsal head, moderate corresponds to antemortem observation (hair sparse)</li> </ul>
1566	D	Microscopic	
		adrenal glands	- within normal limits
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
			one of pair present
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits

# Individual Animal Listing - FEMALE Terminal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1566	D	Microscopic	
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, mild
			- mineralization, tubular, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> </ul>
			- infiltration, mononuclear cell, minimal
		lung	- within normal limits
			lysis of red blood cells within capillaries.
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- within normal limits

- within normal limits

- within normal limits

- within normal limits

- within normal limits

nerve, sciatic

nose, level a

nose, level b

nose, level c

D - Died on Study

		16	ennina
Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1566	D	Microscopic	
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- polyarteritis, mild
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- alopecia/hypotrichosis, mild
			corresponds to macroscopic observation (skin - hair sparse)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1566	D	Microscopic spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue  trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>hematopoiesis, extramedullary, increased, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>within normal limits</li> <li>hyperplasia, squamous cell, moderate</li> <li>inflammation, subacute/chronic, mild</li> <li>within normal limits</li> <li>dosing injury</li> </ul>
1567	D	<b>Macroscopic</b> kidneys	- irregular surface, bilateral, mild

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1567	D	Macroscopic	
		lung with bronchi	<ul> <li>discoloration, red, multiple lobes, moderate</li> </ul>
		pituitary gland	- enlarged, minimal
		skin	<ul> <li>hair sparse, head, right lateral thorax, moderate</li> </ul>
			corresponds to antemortem observation (hair sparse)
1567	D	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1567	D	Microscopic	
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- mineralization, tubular, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
			corresponds to macroscopic observation (kidneys - irregular surface)
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> </ul>
			- infiltration, mononuclear cell, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1567	D	Microscopic	
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- alopecia/hypotrichosis, mild
			corresponds to macroscopic observation (skin - hair sparse)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1567	D	Microscopic	
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- polyp, stromal, benign, primary, incidental, not cause of death
		vagina	- within normal limits
		non-correlated macro observation	- lung with bronchi - discoloration, red
			- pituitary gland - enlarged
		Cause of Death	- dosing injury

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1573	Е	Macroscopic	
		adrenal glands	- enlarged, left, mild
		brain	- discoloration, tan, moderate
		kidneys	- discoloration, tan, pelvis, bilateral, mild
		liver	- focus/foci, tan, median lobe, right lateral lobe, mild
			- nodule, tan, left lateral lobe, present
			approximately 0.4 cm in diameter.
		lung with bronchi	- discoloration, pink, multiple lobes, mild
		lymph node, axillary	- within normal limits
			draining node for mass b, right.
		lymph node, iliac	- within normal limits
			draining node for mass d.
		lymph node, inguinal	- not identified, left, no grade
			draining node for mass a.
		lymph node, mesenteric	- within normal limits
			draining node for mass c.
		pancreas	- mass, tan, mass c, present
			approximately 0.6 cm in diameter.
		pituitary gland	- enlarged, red, severe

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1573	E	Macroscopic	
		skin, subcutis	- mass, tan, mass b, right axillary area, present
			corresponds to antemortem observation (nodule)
			approximately 2.0 cm in diameter.
			- mass, ulcerated, mass a, left inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 7.5 x 6.0 x 3.0 cm, tan.
		uterus with cervix	- mass, tan, mass d, present
			approximately 4.0 cm in diameter.
1573	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, severe</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1573	Е	Microscopic	
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- degeneration/atrophy, retina, unilateral, mild
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, bilateral, mild
			corresponds to macroscopic observation (kidneys - discoloration, tan)
			- edema, papilla, bilateral, mild
			corresponds to macroscopic observation (kidneys - discoloration, tan)
			- hyperplasia, transitional cell, bilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1573	E	Microscopic large intestine, cecum large intestine, colon large intestine, rectum larynx liver  lung lymph node, axillary lymph node, iliac lymph node, mandibular lymph node, mesenteric	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>adenoma, hepatocellular, benign, primary, incidental, not cause of death corresponds to macroscopic observation (liver - nodule)</li> <li>focus of cellular alteration, basophilic, minimal</li> <li>hypertrophy, hepatocyte, centrilobular, mild</li> <li>necrosis, hepatocytes, centrilobular, mild</li> <li>corresponds to macroscopic observation (liver - focus/foci, tan)</li> <li>histiocytosis, alveolar, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1573	Е	Microscopic	
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass b)
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

E - Euthanized in extremis

#### Individual Animal Listing - FEMALE Terminal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1573	Е	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits

- within normal limits

- within normal limits

ureters urinary bladder

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1573	E	Microscopic	
		uterus with cervix	<ul> <li>carcinoma, squamous cell, malignant, primary, incidental, not cause of death corresponds to macroscopic observation (uterus with cervix - mass d)</li> </ul>
		vagina	- within normal limits
		non-correlated macro observation	- brain - discoloration, tan
			- lung with bronchi - discoloration, pink
			- pancreas - mass c
		Cause of Death	- mammary tumor
1574	E	Macroscopic	
		pituitary gland	- enlarged, red, severe
1574	E	Microscopic	•
		adrenal glands	<ul> <li>adenoma, cortical, benign, unilateral, primary, incidental, not cause of death</li> </ul>
			<ul> <li>angiectasis/cystic degeneration, focal cortical, unilateral, moderate</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1574	E	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
		•	- nephropathy, chronic progressive, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1574	Е	Microscopic	
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> </ul>
		lung	<ul> <li>histiocytosis, alveolar, minimal</li> </ul>
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1574	Е	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- hyperplasia, epithelial, limiting ridge, minimal
		thymus	- depletion, lymphoid, generalized, moderate

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1574	E	Microscopic thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>hyperplasia, c-cell, focal, unilateral, mild</li> <li>within normal limits</li> <li>pituitary tumor</li> </ul>
1575	D	Macroscopic all tissues	- within normal limits
1575	D	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, mild</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> </ul>

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1575	D	Microscopic	
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, bilateral, minimal
		•	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			- necrosis, papillary, bilateral, severe
			- nephropathy, chronic progressive, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits

Group,			
Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1575	D	Microscopic	
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- focus of cellular alteration, eosinophilic, minimal
			- hyperplasia, bile duct, minimal
			<ul> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> </ul>
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1575	D	Microscopic	
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, lymphoid, medulla, mild

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S - Scheduled necropsy D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1576	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1576	S	Microscopic	
		kidneys	<ul> <li>dilatation, tubular, bilateral, mild</li> <li>edema, papilla, bilateral, minimal</li> <li>hyperplasia, transitional cell, bilateral, minimal</li> <li>mineralization, pelvic, bilateral, minimal</li> <li>nephropathy, chronic progressive, bilateral, mild</li> <li>corresponds to macroscopic observation (kidneys - irregular surface)</li> </ul>
		lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum larynx	<ul> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1576	S	Microscopic	
1576	S	Microscopic liver  lung lymph node, mandibular lymph node, mesenteric mammary gland  nerve, sciatic	<ul> <li>adenoma, hepatocellular, benign, primary, incidental, not cause of death corresponds to macroscopic observation (liver - focus/foci, tan)</li> <li>degeneration, cystic, focal, minimal</li> <li>focus of cellular alteration, basophilic, minimal</li> <li>focus of cellular alteration, eosinophilic, moderate corresponds to macroscopic observation (liver - focus/foci, tan)</li> <li>hypertrophy, hepatocyte, panlobular, mild</li> <li>infiltration, mononuclear cell, minimal</li> <li>necrosis, individual hepatocyte, mild</li> <li>histiocytosis, alveolar, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>fibroadenoma, benign, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a)</li> <li>hyperplasia, lobular, mild</li> <li>degeneration, axonal/myelin, minimal</li> </ul>
		nose, level a	- within normal limits
		nose, level b	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1576	S	Microscopic	
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits

Microscopic spinal cord, thoracic spleen	- within normal limits
spinal cord, thoracic	- within normal limits
•	within normal limits
spleen	- within normal innits
0010011	- within normal limits
stomach, glandular	- within normal limits
stomach, nonglandular	- within normal limits
thymus	- depletion, lymphoid, generalized, moderate
thyroid gland	<ul> <li>adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death</li> </ul>
tongue	- hyperplasia, squamous cell, mild
	- inflammation, subacute/chronic, mild
trachea	- within normal limits
ureters	- within normal limits
urinary bladder	- within normal limits
uterus with cervix	- polyp, stromal, benign, primary, incidental, not cause of death
vagina	- within normal limits
Macroscopic	
lung with bronchi	- discoloration, tan, multiple lobes, moderate
	ureters urinary bladder uterus with cervix vagina  Macroscopic

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1577	E	Macroscopic	
		lymph node, iliac	- within normal limits
			draining node for mass a, left.
		lymph node, inguinal	- not identified, right, no grade
			draining node for mass b.
		skin, subcutis	- abscess, left inguinal area, moderate
			corresponds to antemortem observation (nodule)
			- mass, tan, mass a, left anogenital region, present
			corresponds to antemortem observation (mass 1 swelling)
			approximately 5.0 cm in diameter.
			<ul> <li>mass, tan, mass b, right inguinal area, present corresponds to antemortem observation (mass 2)</li> </ul>
			approximately 4.5 cm in diameter.
1577	Е	Microscopic	approximately 4.0 on in diameter.
1017	_	adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
			- hyperplasia, focal medullary, unilateral, minimal
			<ul> <li>pheochromocytoma, benign, unilateral, primary, incidental, not cause of death</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations	
500 mg/kg/day				
1577	E	Microscopic aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus eyes eyes, optic nerves eyes, retina galt harderian glands heart joint, tibiofemoral	<ul> <li>within normal limits</li> <li>hyperplasia, granulocytic, minimal</li> <li>within normal limits</li> </ul>	

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1577	Е	Microscopic	
		kidneys	- cyst, unilateral, mild
			- dilatation, tubular, bilateral, mild
			- edema, papilla, bilateral, minimal
			- mineralization, pelvic, unilateral, minimal
			- mineralization, tubular, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- degeneration, cystic, focal, mild
			- hyperplasia, bile duct, mild
			<ul> <li>hypertrophy, hepatocyte, panlobular, mild</li> </ul>
			<ul> <li>necrosis, hepatocytes, centrilobular, mild</li> </ul>
		lung	- histiocytosis, alveolar, minimal
		lymph node, iliac	
		lymph node, mesenteric	- within normal limits
		_	<ul><li>within normal limits</li><li>within normal limits</li><li>within normal limits</li></ul>

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1577	E	Microscopic	
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - abscess; skin, subcutis - mass a; skin, subcutis - mass b)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1577	Е	Microscopic	
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- hyperplasia, epithelial, limiting ridge, minimal
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1577	Е	Microscopic uterus with cervix vagina non-correlated macro observation Cause of Death	<ul> <li>metaplasia, squamous, minimal</li> <li>within normal limits</li> <li>lung with bronchi - discoloration, tan</li> <li>mammary tumor</li> </ul>
1578	S	Macroscopic kidneys	- irregular surface, bilateral, mild
1578	S	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus eyes	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, mild</li> <li>within normal limits</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1578	S	Microscopic	
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- edema, papilla, bilateral, mild
			- hyperplasia, transitional cell, bilateral, minimal
			- mineralization, pelvic, bilateral, mild
			- mineralization, tubular, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
			corresponds to macroscopic observation (kidneys - irregular surface)
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1578	S	Microscopic	
		liver	- hyperplasia, bile duct, minimal
			- hypertrophy, hepatocyte, centrilobular, minimal
		lung	- histiocytosis, alveolar, mild
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	- cyst, minimal
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
500 mg/kg/day 1578	S	Microscopic salivary gland, sublingual skeletal muscle, biceps femoris skin small intestine, duodenum small intestine, ileum small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland  tongue trachea ureters urinary bladder	<ul> <li>within normal limits</li> <li>degeneration/necrosis, myofiber, minimal</li> <li>within normal limits</li> <li>hematopoiesis, extramedullary, increased, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death</li> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1578	S	Microscopic	
		uterus with cervix	- hyperkeratosis, minimal
			<ul> <li>hyperplasia, squamous cell, mild</li> </ul>
		vagina	- within normal limits
1579	E	Macroscopic	
		kidneys	- irregular surface, bilateral, mild
		lymph node, axillary	- not identified, right, no grade
			draining node for mass a
		pituitary gland	- enlarged, red, moderate
		skin	- hair sparse, ventral abdomen, mild
			corresponds to antemortem observation (hair sparse)
		skin, subcutis	<ul> <li>mass, ulcerated, mass a, right axillary area, present</li> </ul>
			corresponds to antemortem observation (mass 1)
			approximately 6.0 x 5.0 x 4.0 cm, tan
1579	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
			<ul> <li>hyperplasia, focal medullary, unilateral, moderate</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1579	E	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), minimal
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1579	Е	Microscopic	
		kidneys	<ul> <li>dilatation, tubular, bilateral, minimal</li> <li>edema, papilla, bilateral, mild</li> <li>hyperplasia, transitional cell, bilateral, minimal</li> <li>mineralization, pelvic, bilateral, minimal</li> <li>mineralization, tubular, bilateral, minimal</li> <li>nephropathy, chronic progressive, bilateral, mild</li> <li>corresponds to macroscopic observation (kidneys - irregular</li> </ul>
		lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum	surface) - within normal limits - within normal limits - within normal limits - within normal limits
		larynx liver lung lymph node, mandibular lymph node, mesenteric	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1579	Е	Microscopic	
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1579	E	Microscopic	
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- alopecia/hypotrichosis, mild
			corresponds to macroscopic observation (skin - hair sparse)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- hyperplasia, epithelial, limiting ridge, minimal
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, lymphoid, medulla, mild
		thyroid gland	- within normal limits
		tongue	- hyperplasia, squamous cell, mild
			- inflammation, subacute/chronic, mild
		trachea	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1579	E	Microscopic ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>hyperplasia, endometrial, mild</li> <li>hyperplasia, squamous cell, mild</li> <li>within normal limits</li> <li>mammary tumor</li> </ul>
1580	E	Macroscopic pituitary gland	- enlarged, moderate
1580	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, mild</li> <li>within normal limits</li> <li>compression, ventral (pituitary tumor), moderate</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1580	E	Microscopic	
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, mild
			- nephropathy, chronic progressive, bilateral, mild
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hypertrophy, hepatocyte, centrilobular, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1580	Е	Microscopic	
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits

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Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1580	E	Microscopic	
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
		thyroid gland	- hyperplasia, c-cell, focal, unilateral, minimal
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits

Group, Animal Number	Fate	Tissue	Observations	
500 mg/kg/day				
1580	Е	Microscopic		
		vagina	- within normal limits	
		Cause of Death	- pituitary tumor	
1581	S	Macroscopic		
		all tissues	- within normal limits	
1581	S	Microscopic		
		adrenal glands	- hyperplasia, focal medullary, unilateral, mild	
		aorta	- within normal limits	
		bone marrow, femur	- within normal limits	
		bone marrow, sternum	- within normal limits	
		bone, femur	- within normal limits	
		bone, sternum	- within normal limits	
		brain	- within normal limits	
		esophagus	- within normal limits	
		eyes	- within normal limits	
		eyes, optic nerves	- within normal limits	
		eyes, retina	- within normal limits	

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1581	S	Microscopic	
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- edema, papilla, bilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hyperplasia, bile duct, minimal
			- hypertrophy, hepatocyte, centrilobular, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild

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Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1581	S	Microscopic	
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
			- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1581	S	Microscopic small intestine, jejunum	<ul><li>within normal limits</li><li>within normal limits</li></ul>
		spinal cord, cervical spinal cord, lumbar spinal cord, thoracic	- within normal limits - within normal limits - within normal limits
		spleen stomach, glandular	<ul> <li>within normal limits</li> <li>within normal limits</li> </ul>
		stomach, nonglandular thymus	<ul> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> </ul>
		thyroid gland tongue	<ul> <li>within normal limits</li> <li>within normal limits</li> </ul>
		trachea ureters	<ul> <li>within normal limits</li> <li>within normal limits</li> </ul>
		urinary bladder uterus with cervix	<ul> <li>within normal limits</li> <li>within normal limits</li> </ul>
		vagina	- within normal limits
1582	Е	<b>Macroscopic</b> kidneys	- irregular surface, bilateral, mild

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1582	E	Macroscopic	
		pituitary gland	- enlarged, severe
1582	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	<ul> <li>compression, ventral (pituitary tumor), mild</li> </ul>
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1582	Е	Microscopic	
		kidneys	- dilatation, tubular, bilateral, minimal
			- edema, papilla, bilateral, mild
			- hyperplasia, transitional cell, bilateral, mild
			- mineralization, pelvic, bilateral, mild
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
			corresponds to macroscopic observation (kidneys - irregular surface)
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>adenoma, hepatocellular, benign, primary, incidental, not cause of death</li> </ul>
			- degeneration, cystic, focal, minimal
			- hyperplasia, bile duct, minimal
			- hypertrophy, hepatocyte, centrilobular, minimal
			- infiltration, mononuclear cell, minimal
		lung	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1582	Е	Microscopic	
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1582	E	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- hyperplasia, c-cell, focal, unilateral, minimal
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits

Group, Animal Number	Fate	Tissue	Observations	
500 mg/kg/day				
1582	E	Microscopic urinary bladder uterus with cervix vagina Cause of Death	<ul><li>within normal limits</li><li>within normal limits</li><li>within normal limits</li><li>pituitary tumor</li></ul>	
1583 <sup>r</sup>	E	Macroscopic kidneys lymph node, axillary lymph node, inguinal pituitary gland	<ul> <li>irregular surface, bilateral, mild</li> <li>enlarged, right, mild</li> <li>draining node for mass a.</li> <li>not identified, right, no grade</li> <li>draining node for mass b.</li> <li>enlarged, mild</li> </ul>	

E - Euthanized *in extremis* Replacement animal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1583 <sup>r</sup>	E	Macroscopic	
		skin, subcutis	- abscess, left axillary area, mild
			- mass, red, mass b, right anogenital region, present
			corresponds to antemortem observation (mass 2)
			approximately 2.0 cm in diameter.
			<ul> <li>mass, ulcerated, mass a, right axillary area, present</li> </ul>
			corresponds to antemortem observation (mass 1)
			approximately 2.5 x 4.0 x 1.0 cm, tan.
1583 <sup>r</sup>	E	Microscopic	
		adrenal glands	- hematopoiesis, extramedullary, bilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, mild
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain .	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits

E - Euthanized *in extremis* Replacement animal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1583 <sup>r</sup>	Е	Microscopic	
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, bilateral, mild
			- edema, papilla, bilateral, mild
			- hydronephrosis, unilateral, mild
			<ul> <li>hyperplasia, transitional cell, bilateral, minimal</li> </ul>
			- mineralization, tubular, bilateral, mild
			<ul> <li>nephropathy, chronic progressive, bilateral, moderate</li> </ul>
			corresponds to macroscopic observation (kidneys - irregular surface)
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

E - Euthanized *in extremis* Replacement animal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1583 <sup>r</sup>	E	Microscopic	
		liver	- hematopoiesis, extramedullary, minimal
			<ul> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> </ul>
		lung	- histiocytosis, alveolar, minimal
		lymph node, axillary	<ul> <li>hyperplasia, lymphocyte/plasmacyte, medulla, mild</li> </ul>
			corresponds to macroscopic observation (lymph node, axillary - enlarged)
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	<ul> <li>inflammation, hair follicle/epidermis, minimal</li> </ul>
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits

E - Euthanized *in extremis* Replacement animal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1583 <sup>r</sup>	Е	Microscopic	
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		skin, subcutis	- abscess, mild
			corresponds to macroscopic observation (skin, subcutis - abscess)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits

E - Euthanized *in extremis* Replacement animal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1583 <sup>r</sup>	E	Microscopic spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue  trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>hematopoiesis, extramedullary, increased, moderate</li> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, severe</li> <li>within normal limits</li> <li>hyperplasia, squamous cell, moderate</li> <li>inflammation, subacute/chronic, mild</li> <li>within normal limits</li> <li>mithin normal limits</li> <li>mammary tumor</li> </ul>
1584 <sup>r</sup>	D	<b>Macroscopic</b> kidneys	- irregular surface, tan, bilateral, mild

E - Euthanized *in extremis* D - Died on Study Replacement animal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1584 <sup>r</sup>	D	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			- hyperplasia, focal medullary, unilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits

D - Died on Study

Replacement animal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1584 <sup>r</sup>	D	Microscopic	
		kidneys	- edema, papilla, bilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, mild
			- necrosis, papillary, bilateral, severe
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
			corresponds to macroscopic observation (kidneys - irregular surface)
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- degeneration, cystic, focal, minimal
			<ul> <li>hypertrophy, hepatocyte, centrilobular, mild</li> </ul>
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		nerve, sciatic	- degeneration, axonal/myelin, minimal

D - Died on Study

Replacement animal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1584 <sup>r</sup>	D	Microscopic	
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits

D - Died on Study

Replacement animal

### Individual Animal Listing - FEMALE Terminal

Group, Animal Number Observations Fate Tissue 500 mg/kg/day 1584<sup>r</sup> D Microscopic spinal cord, lumbar - within normal limits spinal cord, thoracic - within normal limits - hematopoiesis, extramedullary, increased, minimal spleen stomach, glandular - within normal limits stomach, nonglandular - within normal limits thymus - depletion, lymphoid, generalized, severe thyroid gland - within normal limits - hyperplasia, squamous cell, mild tongue - inflammation, subacute/chronic, mild trachea - within normal limits - within normal limits ureters urinary bladder - within normal limits uterus with cervix - within normal limits - within normal limits vagina Cause of Death - kidney inflammation/necrosis

D - Died on Study

Replacement animal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1585	S	Macroscopic	
		liver	- mass, tan, mass a, right lateral lobe, present
			approximately 2.5 cm in diameter.
			- mass, tan, mass b, median lobe, present
			approximately 0.7 cm in diameter.
		lymph node, hepatic	- not identified, no grade
			draining node for mass a and mass b.
1585	S	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1585	S	Microscopic galt harderian glands heart joint, tibiofemoral kidneys  lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum larynx	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>cardiomyopathy, minimal</li> <li>within normal limits</li> <li>dilatation, tubular, unilateral, mild</li> <li>edema, papilla, bilateral, mild</li> <li>necrosis, papillary, unilateral, mild</li> <li>nephropathy, chronic progressive, bilateral, mild</li> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1585	S	Microscopic	
1989	5	lung lymph node, mandibular lymph node, mesenteric mammary gland nerve, sciatic nose, level a nose, level b nose, level c nose, level d ovaries oviducts	<ul> <li>adenoma, hepatocellular, benign, multiple, primary, incidental, not cause of death corresponds to macroscopic observation (liver - mass a; liver - mass b)</li> <li>degeneration, cystic, focal, minimal</li> <li>hyperplasia, bile duct, minimal</li> <li>hypertrophy, hepatocyte, centrilobular, mild</li> <li>histiocytosis, alveolar, mild</li> <li>within normal limits</li> <li>within normal limits</li> <li>hyperplasia, lobular, mild</li> <li>degeneration, axonal/myelin, minimal</li> <li>within normal limits</li> <li>hyperplasia, sex-cord/stromal, unilateral, minimal</li> <li>within normal limits</li> </ul>
		pancreas	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1585	S	Microscopic	
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1585	S	Microscopic	
		thymus	<ul> <li>depletion, lymphoid, generalized, moderate</li> </ul>
			<ul> <li>hyperplasia, epithelial cell, mild</li> </ul>
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
1586	D	Macroscopic	
		adrenal glands	- enlarged, red, right, minimal
		foot/feet	- absent portion/cannibalized, left foreleg/limb, no grade
			corresponds to antemortem observation (cannibalized/partially cannibalized)
		pituitary gland	- enlarged, red, mild

S - Scheduled necropsy D - Died on Study

500 mg/kg/day		Tissue	Observations
1586	D	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, unilateral, severe</li> <li>corresponds to macroscopic observation (adrenal glands - enlarged)</li> <li>hyperplasia, focal cortical, unilateral, minimal</li> <li>pheochromocytoma, benign, unilateral, primary, incidental, not cause of death</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	<ul> <li>hyperplasia, granulocytic, mild</li> </ul>
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	<ul> <li>not examined autolysis too severe for diagnosis</li> </ul>
		galt	- not examined

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1586	D	Microscopic	
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, bilateral, mild
			- edema, papilla, bilateral, mild
			- mineralization, pelvic, unilateral, minimal
			- mineralization, tubular, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, moderate
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hypertrophy, hepatocyte, centrilobular, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- not examined
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		nerve, sciatic	- degeneration, axonal/myelin, minimal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1586	D	Microscopic	
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- not examined
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- not examined
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits

			Terminal
Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1586	D	Microscopic	
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- erosion/ulcer, limiting ridge, minimal
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- hyperplasia, squamous cell, moderate
			- inflammation, subacute/chronic, mild
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1587	S	Macroscopic	
		adrenal glands	- enlarged, bilateral, mild
		liver	- mass, red, mass b, caudate lobe, present
			approximately 3.5 cm in diameter.
		lymph node, hepatic	- within normal limits
			draining node for mass b.
		lymph node, inguinal	- within normal limits
			draining node for mass a, right.
		mammary gland	<ul> <li>swollen/thickened, tan, generalized, mild</li> </ul>
			corresponds to antemortem observation (swelling)
		skin, subcutis	<ul> <li>mass, tan, mass a, right anogenital region, present</li> </ul>
			corresponds to antemortem observation (nodule)
			approximately 1.5 cm in diameter.
1587	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, unilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1587	S	Microscopic	
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- edema, papilla, bilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1587	S	Microscopic	
		lung lymph node, hepatic lymph node, inguinal lymph node, mandibular lymph node, mesenteric mammary gland  nerve, sciatic nose, level a nose, level b nose, level c	<ul> <li>adenoma, hepatocellular, benign, primary, incidental, not cause of death corresponds to macroscopic observation (liver - mass b)</li> <li>focus of cellular alteration, clear, minimal</li> <li>focus of cellular alteration, eosinophilic, minimal</li> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> <li>histiocytosis, alveolar, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>fibroadenoma, benign, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a) mammary tumor on 18 r-1 and 26-1 are the same tumor.</li> <li>hyperplasia, lobular, minimal</li> <li>degeneration, axonal/myelin, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> </ul>

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1587	S	Microscopic	
		nose, level d	- within normal limits
		ovaries	- hyperplasia, sex-cord/stromal, unilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1587	S	Microscopic spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina non-correlated macro observation	<ul> <li>within normal limits</li> <li>hematopoiesis, extramedullary, increased, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, severe</li> <li>within normal limits</li> <li>dilatation, gland/lumen, mild</li> <li>within normal limits</li> <li>adrenal glands - enlarged</li> <li>mammary gland - swollen/thickened</li> </ul>
1588	E	Macroscopic liver	- enlarged, multiple lobes, moderate

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations	
500 mg/kg/day				
1588	E	Macroscopic		
		lymph node, axillary	- within normal limits	
			draining node for mass a, right.	
		skin, subcutis	- mass, ulcerated, mass a, right axillary area, present	
			corresponds to antemortem observation (mass 1)	
			approximately 11.0 cm in diameter, tan.	
1588	E	Microscopic		
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>	
			- hyperplasia, focal medullary, unilateral, minimal	
		aorta	- within normal limits	
		bone marrow, femur	- hyperplasia, granulocytic, mild	
		bone marrow, sternum	- hyperplasia, granulocytic, mild	
		bone, femur	- within normal limits	
		bone, sternum	- within normal limits	
		brain	- within normal limits	
		esophagus	- within normal limits	
		eyes	- within normal limits	
		eyes, optic nerves	- within normal limits	

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1588	Е	Microscopic	
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- angiectasis, minimal
			- focus of cellular alteration, basophilic, minimal
			- focus of cellular alteration, eosinophilic, minimal
			- hypertrophy, hepatocyte, centrilobular, mild
			corresponds to macroscopic observation (liver - enlarged)
			- necrosis, focal, minimal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1588	Е	Microscopic	
		lung	- histiocytosis, alveolar, minimal
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	- hyperplasia, focal, pars distalis, minimal
		salivary gland, mandibular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1588	E	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- hyperplasia, epithelial, limiting ridge, minimal
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1588	E	Microscopic uterus with cervix vagina Cause of Death	<ul><li>within normal limits</li><li>within normal limits</li><li>mammary tumor</li></ul>
1589	E	Macroscopic adrenal glands kidneys liver ovaries pituitary gland	<ul> <li>enlarged, red, right, mild</li> <li>cyst, clear, bilateral, moderate</li> <li>focus/foci, tan, left lateral lobe, mild</li> <li>cyst, clear, right, mild</li> <li>enlarged, severe</li> </ul>
1589	E	Microscopic adrenal glands  aorta bone marrow, femur	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> <li>corresponds to macroscopic observation (adrenal glands - enlarged)</li> <li>within normal limits</li> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1589	Е	Microscopic	
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	<ul> <li>compression, ventral (pituitary tumor), moderate</li> </ul>
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, bilateral, moderate
		•	corresponds to macroscopic observation (kidneys - cyst)
			- edema, papilla, bilateral, mild
			- mineralization, pelvic, bilateral, mild
			- mineralization, tubular, bilateral, mild
			- nephropathy, chronic progressive, bilateral, moderate
		lacrimal glands, exorbital	- within normal limits

hilic, moderate ervation (liver - focus/foci, tan) ophilic, moderate ervation (liver - focus/foci, tan) oular, minimal is, sinus, minimal
se ok

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1589	E	Microscopic	
		ovaries	- cyst, unilateral, minimal
			corresponds to macroscopic observation (ovaries - cyst)
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1589	E	Microscopic	
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	<ul> <li>depletion, lymphoid, generalized, severe</li> </ul>
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, minimal
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1590	Е	Macroscopic	
		adrenal glands	- enlarged, right, mild

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1590	E	Macroscopic	
		lymph node, inguinal	<ul> <li>not identified, right, no grade draining node for mass a.</li> </ul>
		skin, subcutis	<ul> <li>mass, ulcerated, mass a, right inguinal area, present corresponds to antemortem observation (mass 1) approximately 3.0 cm in diameter. red.</li> </ul>
1590	Е	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, severe</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)
			<ul> <li>pheochromocytoma, benign, unilateral, primary, incidental, not cause of death</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits

### Individual Animal Listing - FEMALE Terminal

Group, Observations Animal Number Fate Tissue 500 mg/kg/day 1590 Ε Microscopic esophagus - within normal limits - within normal limits eyes eyes, optic nerves - within normal limits - within normal limits eyes, retina galt - within normal limits harderian glands - within normal limits - cardiomyopathy, minimal heart joint, tibiofemoral - within normal limits kidneys - dilatation, tubular, bilateral, mild - edema, papilla, bilateral, mild - hyperplasia, transitional cell, bilateral, minimal - mineralization, pelvic, bilateral, minimal - mineralization, tubular, bilateral, minimal - nephropathy, chronic progressive, bilateral, mild lacrimal glands, exorbital - within normal limits large intestine, cecum - within normal limits large intestine, colon - within normal limits large intestine, rectum - within normal limits larynx - within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1590	Е	Microscopic	
		liver	- hyperplasia, bile duct, minimal
			<ul> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> </ul>
			- infiltration, mononuclear cell, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1590	E	Microscopic	
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	<ul> <li>depletion, lymphoid, generalized, moderate</li> </ul>
			- hyperplasia, epithelial cell, minimal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1590	E	Microscopic	
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1591	D	Macroscopic	
		all tissues	- within normal limits
1591	D	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1591	D	Microscopic	
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- cataract, unilateral, mild
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- not examined
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, bilateral, minimal
			- edema, papilla, bilateral, minimal
			- hyperplasia, transitional cell, bilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- necrosis, papillary, bilateral, moderate
			- nephropathy, chronic progressive, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits

Total	Group, Animal Number	Fate	Tissue	Observations
1591    D   Microscopic   large intestine, colon   within normal limits   within normal limits   large intestine, rectum   within normal limits   liver   hyperplasia, bile duct, minimal   hypertrophy, hepatocyte, centrilobular, minimal   hypertrophy, hepatocyte, centrilobular, minimal   histicocytosis, alveolar, minimal   limits   lymph node, mandibular   within normal limits   lymph node, mesenteric   within normal limits   hyperplasia, lobular, minimal   nerve, sciatic   within normal limits   nose, level a   within normal limits   within normal limits   nose, level b   within normal limits   within normal limits   nose, level c   nose, level d   within normal limits   within normalimits   within normal limits   within normal limits   within norm	500 mg/kg/day			
large intestine, rectum larynx liver - within normal limits - hyperplasia, bile duct, minimal - hypertrophy, hepatocyte, centrilobular, minimal - histiocytosis, alveolar, minimal - histiocytosis, alveolar, minimal - lymph node, mandibular - within normal limits - within normal limits - within normal limits - hyperplasia, lobular, minimal - within normal limits - hyperplasia, lobular, minimal - hyperplasia, lobular, minimal - hyperplasia, lobular, minimal - within normal limits	1591	D		
larynx			-	
liver  hyperplasia, bile duct, minimal hypertrophy, hepatocyte, centrilobular, minimal lung histiocytosis, alveolar, minimal lymph node, mandibular lymph node, mesenteric mammary gland herve, sciatic nose, level a nose, level b nose, level c nose, level d ovaries oviducts pancreas  hyperplasia, lobular, minimal hyperplasia, lobular, m			large intestine, rectum	- within normal limits
- hypertrophy, hepatocyte, centrilobular, minimal lung - histiocytosis, alveolar, minimal lymph node, mandibular - within normal limits lymph node, mesenteric - within normal limits mammary gland - hyperplasia, lobular, minimal nerve, sciatic - within normal limits nose, level a - within normal limits nose, level b - within normal limits nose, level c - within normal limits nose, level d - within normal limits ovaries - within normal limits ovaries - within normal limits oviducts - within normal limits - within normal limi			larynx	- within normal limits
lung   Second			liver	- hyperplasia, bile duct, minimal
lymph node, mandibular lymph node, mesenteric mammary gland nerve, sciatic nose, level a nose, level b nose, level c nose, level d ovaries oviducts pancreas  - within normal limits				<ul> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> </ul>
lymph node, mesenteric - within normal limits mammary gland - hyperplasia, lobular, minimal nerve, sciatic - within normal limits nose, level a - within normal limits nose, level b - within normal limits nose, level c - within normal limits nose, level d - within normal limits ovaries - within normal limits oviducts - within normal limits oviducts - within normal limits pancreas - atrophy, acinar, mild			lung	- histiocytosis, alveolar, minimal
mammary gland     nerve, sciatic     nose, level a     nose, level b     nose, level c     nose, level d     ovaries     oviducts     pancreas			lymph node, mandibular	- within normal limits
nerve, sciatic     nose, level a     nose, level b     nose, level c     nose, level d     ovaries     oviducts     pancreas     - within normal limits			lymph node, mesenteric	- within normal limits
nose, level a - within normal limits nose, level b - within normal limits nose, level c - within normal limits nose, level d - within normal limits ovaries - within normal limits oviducts - within normal limits oviducts - within normal limits pancreas - atrophy, acinar, mild			mammary gland	- hyperplasia, lobular, minimal
nose, level b - within normal limits nose, level c - within normal limits nose, level d - within normal limits ovaries - within normal limits oviducts - within normal limits pancreas - atrophy, acinar, mild			nerve, sciatic	- within normal limits
nose, level c nose, level d ovaries oviducts pancreas  - within normal limits			nose, level a	- within normal limits
nose, level d - within normal limits ovaries - within normal limits oviducts - within normal limits pancreas - atrophy, acinar, mild			nose, level b	- within normal limits
ovaries - within normal limits oviducts - within normal limits pancreas - atrophy, acinar, mild			nose, level c	- within normal limits
oviducts - within normal limits pancreas - atrophy, acinar, mild			nose, level d	- within normal limits
pancreas - atrophy, acinar, mild			ovaries	- within normal limits
			oviducts	- within normal limits
			pancreas	- atrophy, acinar, mild
			parathyroid glands	- within normal limits
one of pair present			. , ,	one of pair present

Group, Animal Number	Fate	Tissue	Observations	
500 mg/kg/day				
1591	D	Microscopic		
		pharynx	- within normal limits	
		pituitary gland	- hyperplasia, focal, pars distalis, minimal	
		salivary gland, mandibular	- within normal limits	
		salivary gland, parotid	- within normal limits	
		salivary gland, sublingual	- within normal limits	
		skeletal muscle, biceps femoris	- within normal limits	
		skin	- within normal limits	
		small intestine, duodenum	- within normal limits	
		small intestine, ileum	- within normal limits	
		small intestine, jejunum	- within normal limits	
		spinal cord, cervical	- within normal limits	
		spinal cord, lumbar	- within normal limits	
		spinal cord, thoracic	- within normal limits	
		spleen	- within normal limits	
		stomach, glandular	- within normal limits	
		stomach, nonglandular	- within normal limits	
		thymus	- depletion, lymphoid, generalized, severe	
		thyroid gland	- within normal limits	
		tongue	- within normal limits	

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1591	D	Microscopic	
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	<ul> <li>kidney inflammation/necrosis</li> </ul>
1592	E	Macroscopic	
		lymph node, inguinal	- not identified, right, no grade
			draining node for mass b.
			draining node for mass a, left.
		pituitary gland	- enlarged, mild
		skin, subcutis	- mass, tan, mass b, right inguinal area, present
			approximately 2.5 cm in diameter.
			- mass, ulcerated, mass a, left inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 3.0 cm in diameter, tan.
		stomach, glandular	- swollen/thickened, mucosa, mild

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1592	Е	Macroscopic	
		thymus	- small, moderate
1592	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- not examined
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1592	E	Microscopic	
		kidneys	- cyst, unilateral, minimal
			- edema, papilla, bilateral, mild
			- hyperplasia, transitional cell, bilateral, mild
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, minimal</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
			<ul> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> </ul>
			- macrophages, pigmented, minimal
			<ul> <li>necrosis, individual hepatocyte, minimal</li> </ul>
		lung	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	<ul> <li>erythrocytosis/erythrophagocytosis, sinus, minimal</li> </ul>
		lymph node, mesenteric	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
7.1			
500 mg/kg/day			
1592	E	Microscopic	
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a;</li> </ul>
			skin, subcutis - mass b)
			- hyperplasia, lobular, moderate
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		-	

E - Euthanized in extremis

Tissue	Observations
Microscopic	
pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> <li>hyperplasia, diffuse, pars distalis, mild corresponds to macroscopic observation (pituitary gland - enlarged)</li> <li>adenoma is small.</li> </ul>
salivary gland, mandibular	- within normal limits
salivary gland, parotid	- within normal limits
salivary gland, sublingual	- within normal limits
skeletal muscle, biceps femoris	- within normal limits
skin	- within normal limits
small intestine, duodenum	- within normal limits
small intestine, ileum	- within normal limits
small intestine, jejunum	- within normal limits
spinal cord, cervical	- within normal limits
spinal cord, lumbar	- within normal limits
spinal cord, thoracic	- within normal limits
spleen	- within normal limits
•	salivary gland, mandibular salivary gland, parotid salivary gland, sublingual skeletal muscle, biceps femoris skin small intestine, duodenum small intestine, ileum small intestine, jejunum spinal cord, cervical spinal cord, thoracic

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1592	E	<b>Microscopic</b> stomach, glandular	fibrosis, mild     corresponds to macroscopic observation (stomach, glandular -
		stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina non-correlated macro observation Cause of Death	swollen/thickened)  - within normal limits  - not examined  - within normal limits  - thymus - small  - mammary tumor
1593	S	Macroscopic adrenal glands	<ul><li>cyst, clear, right, mild</li><li>enlarged, left, mild</li></ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1593	S	Macroscopic	
		kidneys	- irregular surface, bilateral, mild
		lymph node, inguinal	- within normal limits
			draining node for mass a, left.
		skin, subcutis	- mass, tan, mass a, left anogenital region, present
			corresponds to antemortem observation (swelling)
			approximately 4.0 x 3.5 x 1.5 cm.
1593	S	Microscopic	
		adrenal glands	<ul> <li>adenoma, cortical, benign, unilateral, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)
			<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
			corresponds to macroscopic observation (adrenal glands - cyst)
			- atrophy, cortical, unilateral, moderate
			one medulla present
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild

S - Scheduled necropsy

Fate	Tissue	Observations	
S	Microscopic		
	bone marrow, sternum	<ul> <li>within normal limits</li> </ul>	
	bone, femur	<ul> <li>within normal limits</li> </ul>	
	bone, sternum	- within normal limits	
	brain	- within normal limits	
	esophagus	- within normal limits	
	eyes	- within normal limits	
	eyes, optic nerves	- within normal limits	
	eyes, retina	- within normal limits	
	-	- within normal limits	
	harderian glands	- within normal limits	
	heart	- within normal limits	
	joint, tibiofemoral	- within normal limits	
		S Microscopic bone marrow, sternum bone, femur bone, sternum brain esophagus eyes eyes, optic nerves eyes, retina galt harderian glands	S Microscopic bone marrow, sternum - within normal limits bone, femur - within normal limits bone, sternum - within normal limits brain - within normal limits esophagus - within normal limits eyes - within normal limits eyes, optic nerves - within normal limits eyes, retina - within normal limits eyes, retina - within normal limits galt - within normal limits harderian glands - within normal limits harderian glands - within normal limits heart - within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1593	S	Microscopic	
		kidneys	- dilatation, tubular, bilateral, mild
			- edema, papilla, bilateral, mild
			- hydronephrosis, bilateral, mild
			- hyperplasia, transitional cell, bilateral, minimal
			- mineralization, pelvic, unilateral, minimal
			- mineralization, tubular, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
			corresponds to macroscopic observation (kidneys - irregular surface)
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> </ul>
		lung	- granuloma, minimal
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1593	S	Microscopic	
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1593	S	Microscopic	
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- hyperplasia, squamous cell, moderate
			- inflammation, subacute/chronic, mild
		trachea	- within normal limits
		ureters	- dilatation, unilateral, mild
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1593	S	Microscopic	
		vagina .	- within normal limits
1594	S	Macroscopic	
		all tissues	- within normal limits
1594	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits

			remina
Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1594	S	Microscopic	
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	<ul> <li>hyperplasia, transitional cell, unilateral, minimal</li> </ul>
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, minimal</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- angiectasis, minimal
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
			<ul> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> </ul>
		lung	- within normal limits
		lymph node, mandibular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1594	S	Microscopic	
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal

500 mg/kg/day			Observations
1594	S	Microscopic	
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
			- hyperplasia, epithelial cell, mild
		thyroid gland	- within normal limits
		tongue	- hyperplasia, squamous cell, moderate
			- inflammation, subacute/chronic, mild
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1594	S	Microscopic	
		uterus with cervix	- dilatation, gland/lumen, minimal
			- hyperplasia, squamous cell, mild
		vagina	- within normal limits
1595	S	Macroscopic	
		adrenal glands	- enlarged, right, moderate
		lymph node, mesenteric	- within normal limits
			draining node for mass a.
		stomach, nonglandular	- mass, tan, mass a, present
			approximately 0.8 cm in diameter.
1595	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, unilateral, severe</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)
		aorta	- within normal limits
		bone marrow, femur	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1595	S	Microscopic	
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- cataract, unilateral, mild
		eyes, optic nerves	- within normal limits
		eyes, retina	- detachment, retinal, unilateral, mild
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, unilateral, minimal</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1595	S	Microscopic	
		liver	- angiectasis, mild
			<ul> <li>focus of cellular alteration, basophilic, mild</li> </ul>
			<ul> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> </ul>
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1595	S	Microscopic	
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- cyst, keratin, moderate
			corresponds to macroscopic observation (stomach, nonglandular - mass a)
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- hyperplasia, follicular cell, unilateral, minimal
		tongue	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1595	S	Microscopic trachea ureters urinary bladder uterus with cervix vagina	<ul> <li>within normal limits</li> </ul>
1596	D	Macroscopic animal/whole body  kidneys lacrimal glands, exorbital lung with bronchi spleen thymus	<ul> <li>body fat depleted, mild corresponds to antemortem observation (thin)</li> <li>small, right, moderate</li> <li>small, bilateral, mild</li> <li>focus/foci, tan, multiple lobes, mild</li> <li>small, mild</li> <li>small, severe</li> </ul>
1596	D	Microscopic adrenal glands aorta	<ul><li>within normal limits</li><li>within normal limits</li></ul>

S - Scheduled necropsy D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1596	D	Microscopic	
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- not examined
			autolysis too severe for diagnosis
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		joint, tibiolemoral	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1596	D	Microscopic	
		kidneys	- fibrosis, bilateral, severe
			corresponds to macroscopic observation (kidneys - small)
			appears to be secondary to calculi.
			<ul> <li>hyperplasia, transitional cell, unilateral, minimal</li> </ul>
			- mineralization, pelvic, unilateral, mild
			- mineralization, tubular, bilateral, minimal
		lacrimal glands, exorbital	- depletion, secretory, bilateral, severe
			corresponds to macroscopic observation (lacrimal glands, exorbital - small)
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> </ul>
		lung	- histiocytosis, alveolar, minimal
			corresponds to macroscopic observation (lung with bronchi - focus/foci, tan)
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1596	D	Microscopic	
		mammary gland	- within normal limits
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits

500 mg/kg/day 1596 D	Microscopic small intestine, ileum small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen	<ul> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> </ul>
	small intestine, ileum small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> </ul>
	small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> </ul>
	spinal cord, cervical spinal cord, lumbar spinal cord, thoracic	<ul><li>within normal limits</li><li>within normal limits</li><li>within normal limits</li></ul>
	spinal cord, lumbar spinal cord, thoracic	<ul><li>within normal limits</li><li>within normal limits</li></ul>
	spinal cord, thoracic	- within normal limits
	spleen	<ul> <li>depletion, lymphoid, generalized, moderate</li> </ul>
		corresponds to macroscopic observation (spleen - small)
	stomach, glandular	- within normal limits
	stomach, nonglandular	- within normal limits
	thymus	- depletion, lymphoid, generalized, severe
		corresponds to macroscopic observation (thymus - small)
	thyroid gland	- within normal limits
	tongue	- within normal limits
	trachea	- within normal limits
	ureters	- within normal limits
	urinary bladder	- within normal limits
	uterus with cervix	- within normal limits
	vagina	- within normal limits
	Cause of Death	- kidneys; fibrosis; bilateral, severe

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1597	E	Macroscopic	
		kidneys	- irregular surface, bilateral, mild
		liver	- discoloration, brown, multiple lobes, moderate
		lymph node, inguinal	- within normal limits
			draining node for mass a, left.
		pituitary gland	- enlarged, red, moderate
		skin, subcutis	- mass, tan, mass a, left inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 1.6 x 1.6 x 0.5 cm.
		thymus	- small, mild
1597	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, mild</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	<ul> <li>compression, ventral (pituitary tumor), moderate</li> </ul>
		esophagus	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day	_	Missessa	
1597	Е	Microscopic	within a consel Posite
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, bilateral, moderate
		•	corresponds to macroscopic observation (kidneys - irregular surface)
			- edema, papilla, bilateral, mild
			- hyperplasia, transitional cell, bilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			- necrosis, papillary, unilateral, minimal
			- nephropathy, chronic progressive, bilateral, mild
			corresponds to macroscopic observation (kidneys - irregular surface)
		lacrimal glands, exorbital	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1597	E	Microscopic	
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- degeneration, cystic, focal, minimal
			- hypertrophy, hepatocyte, centrilobular, mild
			corresponds to macroscopic observation (liver - discoloration, brown)
			- macrophages, pigmented, minimal
			- necrosis, hepatocytes, centrilobular, mild
			corresponds to macroscopic observation (liver - discoloration, brown)
		lung	- histiocytosis, alveolar, mild
		lymph node, inguinal	- not examined
			misidentified tissue
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenoma, benign, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass a)
		nerve, sciatic	- degeneration, axonal/myelin, minimal

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1597	E	Microscopic	
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- not examined
		skeletal muscle, biceps femoris	- degeneration/regeneration, myofiber, minimal
		skin	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1597	E	Microscopic	
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
			corresponds to macroscopic observation (thymus - small)
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- hyperplasia, c-cell, focal, bilateral, mild
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, minimal
		vagina	- within normal limits

E - Euthanized in extremis

Fate	Tissue	Observations
Е	Microscopic	
	Cause of Death	- pituitary tumor
Е	Macroscopic	
	lymph node, inguinal	- not identified, left, no grade
		draining node for mass a.
	skin, subcutis	- mass, tan, mass a, left inguinal area, present
		approximately 2.0 cm diameter.
Е	Microscopic	
	adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, mild</li> </ul>
		<ul> <li>pheochromocytoma, benign, bilateral, primary, incidental, not cause of death</li> </ul>
	aorta	- within normal limits
	bone marrow, femur	- hyperplasia, granulocytic, mild
	bone marrow, sternum	- within normal limits
	bone, femur	- within normal limits
	bone, sternum	- within normal limits
	brain	- within normal limits
	E	E Microscopic Cause of Death  E Macroscopic lymph node, inguinal skin, subcutis  E Microscopic adrenal glands  aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1598	E	Microscopic	
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- edema, papilla, unilateral, minimal
			- hyperplasia, transitional cell, bilateral, minimal
			- mineralization, pelvic, unilateral, mild
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1598	Е	Microscopic	
		liver	- focus of cellular alteration, basophilic, minimal
			- hypertrophy, hepatocyte, centrilobular, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- dilatation, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- inflammation, mild
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, bilateral, minimal
		oviducts	- within normal limits
		pancreas	- hyperplasia, acinar cell, focal, minimal
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
500 mg/kg/day 1598 E	E	Microscopic pituitary gland  salivary gland, mandibular salivary gland, parotid salivary gland, sublingual skeletal muscle, biceps femoris skin small intestine, duodenum small intestine, ileum	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> <li>within normal limits</li> </ul>
		small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>hematopoiesis, extramedullary, increased, mild</li> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, mild</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1598	E	Microscopic	
		thyroid gland	<ul> <li>adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death</li> </ul>
			- hyperplasia, c-cell, focal, unilateral, minimal
		tongue	<ul> <li>carcinoma, squamous cell, malignant, primary, fatal, positive cause of death</li> </ul>
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- hyperplasia, simple transitional cell, minimal
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- nose/oral tumor
1599	D	Macroscopic	
		liver	- mass, tan, mass a, median lobe, present
			approximately 4.0 x 4.0 x 2.0 cm.
		lymph node, hepatic	- within normal limits
			draining node for mass a.
		pituitary gland	- enlarged, red, mild

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1599	D	Microscopic	
		adrenal glands	angiectasis/cystic degeneration, focal cortical, unilateral, minimal
		aorta	<ul> <li>vacuolation, focal, bilateral, minimal</li> <li>within normal limits</li> </ul>
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- not examined
			autolysis too severe for diagnosis
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1599	D	Microscopic	
		kidneys	- mineralization, pelvic, bilateral, mild
			- nephropathy, chronic progressive, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>carcinoma, hepatocellular, malignant, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (liver - mass a)
			<ul> <li>hypertrophy, hepatocyte, centrilobular, mild</li> </ul>
		lung	- within normal limits
		lymph node, hepatic	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1599	D	Microscopic	
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1599	D	Microscopic	
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	<ul> <li>hematopoiesis, extramedullary, increased, mild</li> </ul>
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- liver tumor
1600	Е	Macroscopic	
		adrenal glands	- enlarged, left, mild

E - Euthanized in extremis

D - Died on Study

			Terrima
Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1600	Е	Macroscopic	
		kidneys	- dilatation, pelvic, bilateral, mild
		lymph node, axillary	- within normal limits
			draining nodes for mass b, left and mass c, right.
		lymph node, mandibular	- within normal limits
			draining node for mass a, right.
		pituitary gland	- enlarged, mild
		skin, subcutis	- mass, firm, mass b, left axillary area, present
			corresponds to antemortem observation (mass 2)
			approximately 4.9 x 4.5 x 2.4 cm, tan.
			- mass, firm, mass c, right axillary area, present
			approximately 4.0 x 2.8 x 2.0 cm, tan.
			- mass, tan, mass a, cervical, right, present
			corresponds to antemortem observation (mass 1)
		stomach, glandular	approximately 8.7 x 8.6 x 2.6 cm swollen/thickened, mild
1600	Е	Microscopic	- Swoller/trickeried, frilld
1000	<b>–</b>	adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral,
		adicilal glarids	moderate
			corresponds to macroscopic observation (adrenal glands - enlarged)

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations	
500 mg/kg/day				
1600	E	Microscopic aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus eyes	<ul> <li>within normal limits</li> </ul>	
		eyes, optic nerves eyes, retina galt harderian glands heart joint, tibiofemoral	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>cardiomyopathy, minimal</li> <li>within normal limits</li> </ul>	

Group, Animal Number	Fate	Tissue	Observations
600 mg/kg/day			
1600	Е	Microscopic	
		kidneys	- edema, papilla, bilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- necrosis, papillary, unilateral, moderate
			corresponds to macroscopic observation (kidneys - dilatation, pelvic)
			only one has appearence of pelvic dilatation (due to papillary necrosis).
			- nephropathy, chronic progressive, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- degeneration, cystic, focal, minimal
			<ul> <li>focus of cellular alteration, basophilic, minimal</li> </ul>
			<ul> <li>focus of cellular alteration, eosinophilic, minimal</li> </ul>
			- hyperplasia, bile duct, minimal
			- hypertrophy, hepatocyte, centrilobular, minimal
		lung	- histiocytosis, alveolar, minimal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
500 mg/kg/day 1600	E	Microscopic lymph node, axillary lymph node, mandibular lymph node, mesenteric mammary gland	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>adenocarcinoma, malignant, primary, incidental, not cause of death</li> <li>corresponds to macroscopic observation (skin, subcutis - mass c)</li> <li>fibroadenoma, benign, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)</li> </ul>
		nerve, sciatic nose, level a nose, level b nose, level c nose, level d ovaries oviducts pancreas	<ul> <li>hyperplasia, lobular, mild</li> <li>degeneration, axonal/myelin, minimal</li> <li>within normal limits</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1600	Е	Microscopic	
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		skin, subcutis	- fibrosarcoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass b)
			collision tumor with a fibroadenoma.
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1600	Е	Microscopic	
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- degeneration, axonal/myelin, mild
		spleen	<ul> <li>hematopoiesis, extramedullary, increased, minimal</li> </ul>
		stomach, glandular	- within normal limits
		stomach, nonglandular	<ul> <li>hyperplasia, epithelial, limiting ridge, minimal</li> </ul>
		thymus	<ul> <li>depletion, lymphoid, generalized, moderate</li> </ul>
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- hyperplasia, c-cell, focal, unilateral, minimal
		tongue	- hyperplasia, squamous cell, moderate
			- inflammation, subacute/chronic, moderate
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		non-correlated macro observation	- stomach, glandular - swollen/thickened
		Cause of Death	- mammary tumor

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1601	D	Macroscopic	
		lymph node, inguinal	<ul> <li>not identified, bilateral, no grade draining node for mass a, b. may be encompassed in masses.</li> </ul>
		mammary gland	- swollen/thickened, right inguinal area, mild
		pituitary gland	- enlarged, mild
		skin	- hair sparse, axillary, shoulder, left, mild
			corresponds to antemortem observation (hair sparse)
		skin, subcutis	- mass, tan, mass b, right inguinal area, present
			approximately 2.0 x 1.5 x 1.0 cm.
			- mass, ulcerated, mass a, left inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 2.0 x 2.0 x 1.0 cm, tan.
1601	D	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, mild</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1601	D	Microscopic	
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- edema, papilla, unilateral, minimal
			- hydronephrosis, unilateral, mild
			- mineralization, pelvic, unilateral, minimal
			- necrosis, papillary, unilateral, mild
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

# Individual Animal Listing - FEMALE

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Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1601	D	Microscopic	
		liver	- focus of cellular alteration, basophilic, moderate
			- necrosis, hepatocytes, centrilobular, moderate
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (mammary gland - swollen/thickened; skin, subcutis - mass a; skin, subcutis - mass b)
			slide 18, 26-1, and 26-2.
			- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits

# Individual Animal Listing - FEMALE

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Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1601	D	Microscopic	
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	- hyperplasia, diffuse, pars distalis, mild
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- alopecia/hypotrichosis, mild
			corresponds to macroscopic observation (skin - hair sparse)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1601	D	Microscopic stomach, glandular stomach, nonglandular thymus thyroid gland  tongue trachea ureters  urinary bladder uterus with cervix vagina	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, severe</li> <li>adenoma, follicular cell, benign, unilateral, primary, incidental, not cause of death</li> <li>cyst, follicular, unilateral, mild</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>one of pair present</li> <li>within normal limits</li> <li>metaplasia, squamous, mild</li> <li>within normal limits</li> </ul>
1602	E	Cause of Death  Macroscopic  adrenal glands kidneys	<ul><li>mammary tumor</li><li>enlarged, right, mild</li><li>irregular surface, bilateral, mild</li></ul>

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1602	Е	Macroscopic	
		pituitary gland	- enlarged, red, moderate
1602	Е	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, severe</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits

Group,	F-t-	<b>T</b>	Observations
Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1602	E	Microscopic	
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, bilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
			corresponds to macroscopic observation (kidneys - irregular surface)
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
			<ul> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> </ul>
		lung	- histiocytosis, alveolar, mild
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1602	E	Microscopic	
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- exudate, nasal passage, minimal
		nose, level b	- exudate, nasal passage, minimal
			- inflammation, minimal
			- metaplasia, squamous, minimal
		nose, level c	- erosion/ulcer, moderate
			- exudate, nasal passage, moderate
			- inflammation, mild
		nose, level d	- erosion/ulcer, moderate
			- exudate, nasal passage, moderate
			- inflammation, mild
		ovaries	- cyst, unilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1602	Е	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- erosion/ulcer, mild
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1602	E	Microscopic uterus with cervix vagina Cause of Death	<ul><li>within normal limits</li><li>within normal limits</li><li>pituitary tumor</li></ul>
1603	E	Macroscopic lymph node, inguinal lymph node, mandibular	<ul> <li>within normal limits</li> <li>draining node for mass a, right.</li> <li>within normal limits</li> </ul>
		pituitary gland skin, subcutis	draining node for mass b, right.  - enlarged, red, moderate  - mass, tan, mass a, right anogenital region, present corresponds to antemortem observation (mass 1) approximately 8.0 cm in diameter.  - mass, tan, mass b, ventral neck, present corresponds to antemortem observation (mass 2)
1603	E	<b>Microscopic</b> adrenal glands	approximately 3.5 cm in diameter.  - atrophy, cortical, bilateral, mild

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1603	E	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, bilateral, minimal
		•	- edema, papilla, unilateral, minimal
			- hyperplasia, transitional cell, bilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1603	E	Microscopic	
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			<ul> <li>hypertrophy, hepatocyte, centrilobular, mild</li> </ul>
			- infiltration, mononuclear cell, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass b)
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1603	E	Microscopic	
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits

500 mg/kg/day  1603  E  Microscopic  small intestine, ileum	Group, Animal Number	Fate	Tissue	Observations
E   Microscopic   small intestine, ileum   within normal limits   small intestine, jejunum   within normal limits   spinal cord, cervical   within normal limits   spinal cord, thoracic   spinal cord, thoracic   within normal limits   spinal cord, thoracic   within normal limits   spinal cord, thoracic   within normal limits   stomach, glandular   within normal limits   stomach, nonglandular   within normal limits   thymus   depletion, lymphoid, generalized, moderate   hyperplasia, epithelial cell, minimal   thyroid gland   within normal limits   tongue   within normal limits   within normal limits   tongue   within normal limits   wi	500 mg/kg/day			
small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular sthymus thyroid gland thyroid gland trachea  - within normal limits		Е	Microscopic	
spinal cord, cervical - within normal limits spinal cord, lumbar - within normal limits spinal cord, thoracic - within normal limits spleen - within normal limits stomach, glandular - within normal limits stomach, nonglandular - within normal limits stomach, nonglandular - within normal limits thymus - depletion, lymphoid, generalized, moderate - hyperplasia, epithelial cell, minimal thyroid gland - within normal limits tongue - within normal limits trachea - within normal limits			small intestine, ileum	- within normal limits
spinal cord, lumbar - within normal limits spinal cord, thoracic - within normal limits spleen - within normal limits stomach, glandular - within normal limits stomach, nonglandular - within normal limits thymus - depletion, lymphoid, generalized, moderate hyperplasia, epithelial cell, minimal thyroid gland - within normal limits tongue - within normal limits trachea - within normal limits			small intestine, jejunum	- within normal limits
spinal cord, thoracic spleen spleen stomach, glandular stomach, nonglandular thyroid gland thyroid gland tongue spinal cord, thoracic spleen spleen spleen stomach, normal limits stomach, nonglandular spleen splee			spinal cord, cervical	- within normal limits
spleen - within normal limits stomach, glandular - within normal limits stomach, nonglandular - within normal limits thymus - depletion, lymphoid, generalized, moderate - hyperplasia, epithelial cell, minimal thyroid gland - within normal limits tongue - within normal limits trachea - within normal limits			spinal cord, lumbar	- within normal limits
stomach, glandular - within normal limits stomach, nonglandular - within normal limits thymus - depletion, lymphoid, generalized, moderate hyperplasia, epithelial cell, minimal thyroid gland - within normal limits tongue - within normal limits trachea - within normal limits			spinal cord, thoracic	- within normal limits
stomach, nonglandular - within normal limits - depletion, lymphoid, generalized, moderate - hyperplasia, epithelial cell, minimal - within normal limits			spleen	- within normal limits
thymus - depletion, lymphoid, generalized, moderate - hyperplasia, epithelial cell, minimal thyroid gland - within normal limits tongue - within normal limits trachea - within normal limits			stomach, glandular	- within normal limits
- hyperplasia, epithelial cell, minimal thyroid gland - within normal limits tongue - within normal limits trachea - within normal limits			stomach, nonglandular	- within normal limits
thyroid gland - within normal limits tongue - within normal limits trachea - within normal limits			thymus	<ul> <li>depletion, lymphoid, generalized, moderate</li> </ul>
tongue - within normal limits trachea - within normal limits				- hyperplasia, epithelial cell, minimal
trachea - within normal limits			thyroid gland	- within normal limits
			tongue	- within normal limits
ureters - within normal limits			trachea	- within normal limits
			ureters	- within normal limits
urinary bladder - within normal limits			urinary bladder	- within normal limits
uterus with cervix - dilatation, gland/lumen, minimal			uterus with cervix	- dilatation, gland/lumen, minimal
vagina - within normal limits			vagina	- within normal limits
Cause of Death - mammary tumor			_	- mammary tumor

			Terrima
Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1604	D	Macroscopic	
		skin	- hair sparse, cranial, ventral thorax, moderate
			corresponds to antemortem observation (hair sparse)
1604	D	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			<ul> <li>hyperplasia, focal medullary, bilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- hyperostosis, minimal
		bone, sternum	- hyperostosis, mild
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1604	D	Microscopic	
		joint, tibiofemoral	- within normal limits
		kidneys	- edema, papilla, bilateral, mild
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			- necrosis, papillary, bilateral, severe
			- nephropathy, chronic progressive, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
			<ul> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> </ul>
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, incidental, not cause of death
			slide 18.
			<ul> <li>hyperplasia, lobular, minimal</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1604	D	Microscopic	
		nerve, sciatic	- within normal limits
		nose, level a	- hyperostosis, minimal
			- inflammation, minimal
		nose, level b	- hyperostosis, mild
		nose, level c	- hyperostosis, mild
		nose, level d	- hyperostosis, mild
		ovaries	- cyst, unilateral, mild
			- fibrosis, unilateral, moderate
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	- hyperplasia, focal, pars distalis, mild
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits

# Individual Animal Listing - FEMALE

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500 mg/kg/day 1604 [	Microscopic skin small intestine, duodenum small intestine, ileum	<ul> <li>alopecia/hypotrichosis, mild</li> <li>corresponds to macroscopic observation (skin - hair sparse)</li> <li>within normal limits</li> </ul>
	skin small intestine, duodenum	corresponds to macroscopic observation (skin - hair sparse)
	skin small intestine, duodenum	corresponds to macroscopic observation (skin - hair sparse)
	•	corresponds to macroscopic observation (skin - hair sparse)
	•	
	small intestine, ileum	
		- within normal limits
	small intestine, jejunum	- within normal limits
	spinal cord, cervical	- within normal limits
	spinal cord, lumbar	- within normal limits
	spinal cord, thoracic	- within normal limits
	spleen	- depletion, lymphoid, generalized, moderate
	stomach, glandular	- within normal limits
	stomach, nonglandular	- within normal limits
	thymus	- depletion, lymphoid, generalized, severe
	thyroid gland	- within normal limits
	tongue	- within normal limits
	trachea	- within normal limits
	ureters	- within normal limits
	urinary bladder	- within normal limits
	uterus with cervix	- within normal limits
	vagina	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1604	D	<b>Microscopic</b> Cause of Death	- kidney inflammation/necrosis
1605	Е	Macroscopic clitoral glands	<ul> <li>enlarged, red, right, mild corresponds to antemortem observation (swelling)</li> </ul>
		kidneys pituitary gland stomach, glandular	<ul><li>irregular surface, bilateral, minimal</li><li>enlarged, red, severe</li><li>focus/foci, red, mucosa, mild</li></ul>
1605	Е	<b>Microscopic</b> adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
		aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum	<ul> <li>within normal limits</li> </ul>
		brain	- compression, ventral (pituitary tumor), mild

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1605	E	Microscopic	
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- edema, papilla, unilateral, minimal
			- hyperplasia, transitional cell, unilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
			corresponds to macroscopic observation (kidneys - irregular surface)
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		_	

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1605	E	Microscopic	
		larynx	- within normal limits
		liver	- hypertrophy, hepatocyte, centrilobular, minimal
			- necrosis, focal, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, primary, mortality-independent corresponds to macroscopic observation (clitoral glands -</li> </ul>
			enlarged)
			- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, bilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1605	E	Microscopic	
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1605	E	Microscopic	
		stomach, glandular	- erosion/ulcer, mild
			corresponds to macroscopic observation (stomach, glandular - focus/foci, red)
			- fibrosis, mild
		stomach, nonglandular	- erosion/ulcer, limiting ridge, mild
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- hyperplasia, squamous cell, minimal
			- inflammation, subacute/chronic, minimal
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1606	E	Macroscopic	
		kidneys	- irregular surface, tan, bilateral, mild

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1606	Е	Macroscopic	
		liver	- focus/foci, tan, median lobe, mild
		lymph node, inguinal	- not identified, right, no grade
			draining node for mass a.
		pituitary gland	- enlarged, red, severe
		skin, subcutis	- mass, tan, mass a, right inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 4.0 x 2.5 x 1.5 cm.
1606	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1606	Е	Microscopic	
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, bilateral, mild
			corresponds to macroscopic observation (kidneys - irregular surface)
			- edema, papilla, bilateral, mild
			<ul> <li>hydronephrosis, bilateral, mild</li> </ul>
			<ul> <li>hyperplasia, transitional cell, bilateral, mild</li> </ul>
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
			corresponds to macroscopic observation (kidneys - irregular surface)
			- pyelitis, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1606	E	Microscopic	
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, mild
			corresponds to macroscopic observation (liver - focus/foci, tan)
			<ul> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> </ul>
			- infiltration, mononuclear cell, minimal
			- vacuolation, focal, minimal
		lung	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1606	E	Microscopic	
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1606	E	Microscopic	
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	<ul> <li>depletion, lymphoid, generalized, moderate</li> </ul>
			- hyperplasia, epithelial cell, mild
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	<ul> <li>hyperplasia, simple transitional cell, minimal</li> </ul>
			- inflammation, minimal
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1607	S	Macroscopic	
		eyes	- cloudy, right, mild
			corresponds to antemortem observation (eye discolored)
		liver	- mass, tan, mass a, median lobe, present
			approximately 2.0 cm in diameter.
			- mass, tan, mass b, left lateral lobe, present
			approximately 3.0 x 1.9 x 0.9 cm.
			- mass, tan, mass c, right lateral lobe, present
			approximately 1.1 x 0.8 x 1.0 cm.
			<ul> <li>mass, tan, mass d, caudate lobe, present</li> </ul>
			approximately 1.7 x 1.5 x 1.3 cm.
		lymph node, hepatic	- within normal limits
			draining node for mass a, mass b, mass c, and mass d.
		pancreas	- enlarged, mild
		pituitary gland	- enlarged, moderate
1607	S	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			- hyperplasia, focal medullary, unilateral, minimal
		aorta	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1607	S	Microscopic	
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- cataract, unilateral, moderate
		•	corresponds to macroscopic observation (eyes - cloudy)
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, mild
		joint, tibiofemoral	- within normal limits
		•	

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1607	S	Microscopic	
		kidneys	<ul> <li>edema, papilla, bilateral, mild</li> <li>hyperplasia, transitional cell, bilateral, minimal</li> <li>inflammation, acute, unilateral, mild</li> <li>mineralization, pelvic, bilateral, mild</li> <li>mineralization, tubular, bilateral, minimal</li> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
		lacrimal glands, exorbital large intestine, cecum large intestine, colon	<ul><li>within normal limits</li><li>within normal limits</li><li>within normal limits</li></ul>
		large intestine, rectum	<ul><li>within normal limits</li><li>within normal limits</li></ul>

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1607	S	Microscopic	
		liver	<ul> <li>adenoma, hepatocellular, benign, multiple, primary, incidental, not cause of death corresponds to macroscopic observation (liver - mass b; liver -</li> </ul>
			mass c; liver - mass d)
			<ul> <li>carcinoma, hepatocellular, malignant, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (liver - mass a)
			- degeneration, cystic, focal, mild
			- focus of cellular alteration, basophilic, mild
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
			<ul> <li>hypertrophy, hepatocyte, panlobular, mild</li> </ul>
		lung	- histiocytosis, alveolar, minimal
		lymph node, hepatic	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1607	S	Microscopic	
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- hyperplasia, acinar cell, focal, moderate
			corresponds to macroscopic observation (pancreas - enlarged)
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1607	S	Microscopic small intestine, ileum small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus  thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina	<ul> <li>within normal limits</li> <li>hematopoiesis, extramedullary, increased, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>hyperplasia, epithelial cell, minimal</li> <li>within normal limits</li> </ul>

### Individual Animal Listing - FEMALE

Terminal
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Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1608	D	Macroscopic	
		kidneys	- irregular surface, right, mild
		liver	- focus/foci, white, left lateral lobe, moderate
		lymph node, axillary	- within normal limits
			draining node for mass a, right.
		pituitary gland	- enlarged, red, mild
		skin, subcutis	- mass, tan, mass a, right axillary area, present
			corresponds to antemortem observation (swelling)
			approximately 3.0 x 2.5 x 1.0 cm.
		uterus with cervix	- enlarged, horn, mild
1608	D	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1608	D	Microscopic	
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- edema, papilla, unilateral, minimal
		•	- mineralization, pelvic, unilateral, mild
			- mineralization, tubular, unilateral, mild
			- necrosis, papillary, unilateral, moderate
			- nephropathy, chronic progressive, bilateral, mild
			corresponds to macroscopic observation (kidneys - irregular surface)
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1608	D	Microscopic	
		liver	<ul> <li>carcinoma, hepatocellular, malignant, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (liver - focus/foci, white)
			- degeneration, cystic, focal, minimal
			- hypertrophy, hepatocyte, centrilobular, minimal
			- infiltration, mononuclear cell, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, minimal
		nerve, sciatic	<ul> <li>degeneration, axonal/myelin, minimal</li> </ul>
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1608	D	Microscopic	
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1608	D	Microscopic spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>not examined</li> <li>within normal limits</li> <li>dilatation, gland/lumen, mild</li> <li>corresponds to macroscopic observation (uterus with cervix - enlarged)</li> <li>granular cell tumor, benign, primary, incidental, not cause of death</li> </ul>
		vagina Cause of Death	<ul><li>within normal limits</li><li>pituitary tumor</li></ul>

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1609	D	Macroscopic	
		kidneys	- irregular surface, bilateral, mild
		lymph node, inguinal	- not identified, right, no grade
			draining node for mass a.
		pituitary gland	- enlarged, red, mild
		skin, subcutis	- mass, tan, mass a, right anogenital region, present
			corresponds to antemortem observation (mass 1)
			approximately 4.0 x 3.0 x 3.0 cm.
		stomach, nonglandular	- swollen/thickened, limiting ridge, mild
1609	D	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
			one medulla present
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1609	D	Microscopic	
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- edema, papilla, unilateral, minimal
			- hyperplasia, transitional cell, bilateral, minimal
			- mineralization, pelvic, unilateral, minimal
			- necrosis, papillary, bilateral, severe
			- nephropathy, chronic progressive, bilateral, mild
			corresponds to macroscopic observation (kidneys - irregular surface)
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1609	D	Microscopic	
		larynx	- within normal limits
		liver	<ul> <li>hypertrophy, hepatocyte, centrilobular, minimal</li> </ul>
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, minimal
		nerve, sciatic	<ul> <li>degeneration, axonal/myelin, minimal</li> </ul>
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	<ul> <li>hyperplasia, acinar cell, focal, minimal</li> </ul>
		parathyroid glands	- not examined
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1609	D	Microscopic	
		pituitary gland	- hyperplasia, diffuse, pars distalis, mild
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1609	D	Microscopic	
		thyroid gland	<ul> <li>carcinoma, follicular cell, malignant, unilateral, primary, incidental, not cause of death</li> </ul>
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, mild
		vagina	- within normal limits
		non-correlated macro observation	- stomach, nonglandular - swollen/thickened
		Cause of Death	- kidney inflammation/necrosis
1610	E	Macroscopic	
		pituitary gland	- enlarged, severe
1610	E	Microscopic	
		adrenal glands	- within normal limits
		aorta	- within normal limits
		bone marrow, femur	- within normal limits

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1610	E	Microscopic	
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	<ul> <li>compression, ventral (pituitary tumor), moderate</li> </ul>
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	<ul> <li>mineralization, tubular, unilateral, minimal</li> </ul>
			<ul> <li>nephropathy, chronic progressive, unilateral, minimal</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1610	E	Microscopic	
		liver	- hematopoiesis, extramedullary, minimal
			- hypertrophy, hepatocyte, centrilobular, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1610	Е	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1610	E	Microscopic	
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1611	E	Macroscopic	
		lymph node, inguinal	- not identified, left, no grade
			draining node for mass a.
		pituitary gland	- enlarged, mild
		skin, subcutis	- mass, cystic, left inguinal area, mass a, present
			corresponds to antemortem observation (mass 1)
			mass a is approximately 6.5 cm in diameter, red, surrounded by approximately 97.0 ml. of fluid and a thin capsule.
1611	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
<u>500 mg/кg/day</u> 1611	E	Microscopic aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus eyes eyes, optic nerves eyes, retina galt harderian glands heart joint, tibiofemoral kidneys	<ul> <li>within normal limits</li> <li>cardiomyopathy, minimal</li> <li>within normal limits</li> <li>edema, papilla, unilateral, minimal</li> <li>hyperplasia, transitional cell, unilateral, minimal</li> <li>mineralization, pelvic, bilateral, minimal</li> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1611	E	Microscopic	
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>degeneration, cystic, focal, minimal</li> </ul>
			<ul> <li>focus of cellular alteration, basophilic, mild</li> </ul>
			<ul> <li>hypertrophy, hepatocyte, centrilobular, mild</li> </ul>
			<ul> <li>infiltration, mononuclear cell, minimal</li> </ul>
		lung	<ul> <li>histiocytosis, alveolar, minimal</li> </ul>
		lymph node, mandibular	<ul> <li>erythrocytosis/erythrophagocytosis, sinus, minimal</li> </ul>
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1611	Е	Microscopic	
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1611	E	Microscopic spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>within normal limits</li> <li>dilatation, gland/lumen, minimal</li> <li>within normal limits</li> <li>mammary tumor</li> </ul>
1612	S	Macroscopic all tissues	- within normal limits

S - Scheduled necropsy E - Euthanized *in extremis* 

			Terrima
Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1612	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
500 mg/kg/day			
1612	S	Microscopic	
		kidneys	- edema, papilla, bilateral, minimal
			- hyperplasia, transitional cell, unilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- degeneration, cystic, focal, minimal
			<ul> <li>hypertrophy, hepatocyte, centrilobular, mild</li> </ul>
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits